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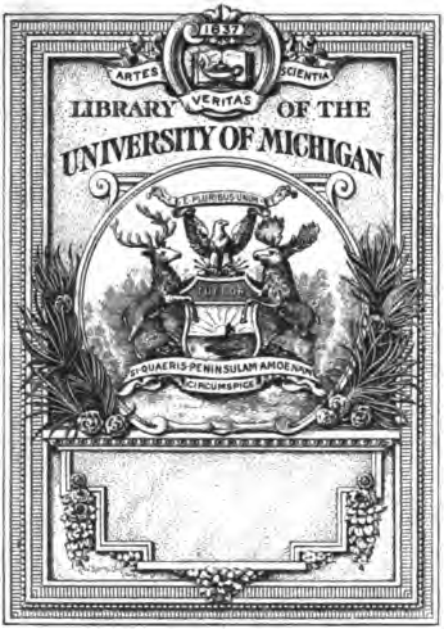
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REPORTS

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CONSULS OF THE UNITED STATES.

VOL. XXXVI.

Nos. 128, 129, 130, and 131.

MONTHS: MAY, JUNE, JULY, AND AUGUST, 1891.

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REPORTS

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CONSULS OF THE UNITED STATES.

No. 128.—MAY, 1891.

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WASHINGTON:
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1891.

CONSULAR REPORTS

ON

COMMERCE, MANUFACTURES, ETC.

No. 128.—MAY, 1891.

THE CONSTITUTION OF BRAZIL.

REPORT BY MINISTER CONGER, OF RIO DE JANEIRO.

I have the honor to report that the constitutional congress met on the 15th day of November last, and, after having considered the constitution submitted by the Provisional Government, adopted it, with few amendments. I inclose herewith a copy.

In addition to the election of General Deodora as President, General Floriano Peixoto was elected Vice President. The day after the election the President was inaugurated, taking the oath of office in the presence of the members of Congress and a large number of citizens.

E. H. CONGER,
Minister.

UNITED STATES LEGATION,
Rio de Janeiro, March 6, 1891.

CONSTITUTION OF THE REPUBLIC OF THE UNITED STATES OF BRAZIL.

[Inclosure in Minister Conger's report.—Translated in the Department.]

We, the representatives of the Brazilian people, united in constitutional congress, to organize a free and democratic régime, do establish, decree, and promulgate the following constitution of the Republic of the United States of Brazil:

TITLE I.—THE FEDERAL ORGANIZATION.

Preliminary Provisions.

ARTICLE 1. The Brazilian nation, adopting as a form of government the Federal Republic proclaimed November 15, 1889, constitutes itself, by the perpetual and indissoluble union of its former provinces, the United States of Brazil.

ART. 2. Each of the former provinces shall constitute a State, and the former municipal district shall form the Federal District, continuing to be the capital of the Union until the following article shall be carried into effect.

ART. 3. In the center there is allotted as the property of the Union a zone of 14,400 square kilometres, which in due time shall be laid off for the establishment of the future federal capital.

Sole paragraph.—After the change of site of the capital, the present Federal District shall constitute a State.

ART. 4. The States shall have the right to incorporate themselves one with another, subdivide themselves, dismember themselves to join with others or form new States, with the consent of the respective local legislatures in two successive annual sessions and the approval of the national Congress.

ART. 5. It shall be the duty of each State to provide, at its own expense, for the necessities of its government and administration; but the Union shall extend assistance to any State which, in case of public calamity, shall demand it.

ART. 6. The Federal Government shall not interfere in matters pertaining peculiarly to the States, save:

(1) To repel foreign invasion, or the invasion of one State by another.

(2) To maintain the federative republican form of government.

(3) To reëstablish order and tranquillity in the States at the request of the respective governments.

(4) To assure the execution of the laws and federal decrees.

ART. 7. It is the exclusive prerogative of the Union to decree:

(1) Duties on imports from foreign countries.

(2) Duties of entry, departure, and stay of vessels; the coasting trade for national articles being free of duties, as well as for foreign merchandise that has already paid an import duty.

(3) Stamp duties, save the restrictions imposed by article 9, § 1, No. 1.

(4) Postal and federal telegraphic taxes.

§ 1. The Union alone shall have the power:

(1) To establish banks of emission.

(2) To create and maintain custom-houses.

§ 2. The taxes decreed by the Union shall be uniform for all the States.

§ 3. The laws of the Union and the acts and decisions of its authorities shall be executed throughout the country by federal officials, except that the enforcement of the former may be committed to the governments of the States, with the consent of the said States.

ART. 8. The Federal Government is forbidden to make distinctions and preferences in favor of the ports of any of the States against those of others.

ART. 9. The States alone are competent to decree taxes:

(1) On the exportation of merchandise not belonging to other States.

(2) On landed property.

(3) On the transmission of property.

(4) On industries and professions.

§ 1. The States also have the exclusive right to decree:

(1) Stamp duties on instruments emanating from their respective governments and business of their internal economy.

(2) Contributions touching their own telegraphs and postal service.

§ 2. The products of the other States are exempt from imposts in the State whence they are exported.

§ 3. It is lawful for a State to levy duties on imports of foreign goods only when intended for consumption in its own territory; but it shall, in such case, cover into the federal treasury the amount of duties collected.

§ 4. The right is reserved to the States of establishing telegraph lines between the different points of their own territory, and between these and those of other States not served by federal lines; but the Union may take possession of them when the general welfare shall require.

ART. 10. The several States are prohibited from taxing the federal property or revenue, or anything in the service of the Union, and *vice versa*.

ART. 11. It is forbidden to the States, as well as to the Union:

(1) To impose duties on the products of the other States, or of foreign countries, in transit through the territory of any State, or from one State to another, as also on the vehicles, whether by land or water, by which they are transported.

(2) To establish, aid, or embarrass the exercise of religious worship.

(3) To enact *ex post facto* laws.

ART. 12. In addition to the sources of revenue set forth in articles 7 and 9, it shall be lawful for the Union, as well as for the States, cumulatively or otherwise, to create any others whatsoever which may not be in contravention of the terms of articles 7, 9, and 11, § 1.

ART. 13. The right of the Union and of the States to legislate in regard to railways and navigation of internal waters shall be regulated by federal law.

Sole paragraph.—The coastwise trade shall be carried on in national vessels.

ART. 14. The land and naval forces are permanent national institutions, intended for the defense of the country from foreign attack and the maintenance of the laws of the land. Within the limits of the law, the armed forces are from their nature held to obedience, each rank to its superior, and bound to support all constitutional institutions.

ART. 15. The legislative, executive, and judicial powers are organs of the national sovereignty, harmonious and independent among themselves.

SECTION 1.—THE LEGISLATIVE POWER.

Chapter I.—General provisions.

ART. 16. The legislative power is vested in the national Congress, with the sanction of the President of the Republic.

§ 1. The national Congress is composed of two branches, the Chamber of Deputies and the Senate.

§ 2. The elections for senators and for deputies shall be held simultaneously throughout the country.

§ 3. No person shall be senator and deputy at the same time.

ART. 17. The Congress shall assemble in the federal capital on the 3d day of May of each year, unless some other day shall be fixed by law, without being convoked, and shall continue in session 4 months from the date of the opening, and may be prorogued, adjourned, or convoked in extraordinary session.

§ 1. The Congress alone shall have the power to deliberate on the prorogation or extension of its session.

§ 2. Each legislature shall last for 3 years.

§ 3. The governor of any State in which there shall be a vacancy in the representation, including the case of resignation, shall order a new election to be held at once.

ART. 18. The Chamber and the Senate shall hold their sessions apart and in public, unless otherwise resolved by a majority vote, and shall deliberate only when, in each of the chambers, there shall be present an absolute majority of its members.

Sole paragraph.—To each of the chambers shall belong the right to verify and recognize the powers of its members, to choose its own presiding officers, to organize its internal government, to regulate the service of its own police rules, and to choose its own secretaries.

ART. 19. The deputies and senators can not be held to account for their opinions, expressions, and votes in the discharge of their mandate.

ART. 20. Deputies and senators, from the time of receiving their certificate of election until a new election, can not be arrested or proceeded against criminally without the permission of their respective chambers, except in the case of a flagrant crime, in which bail is inadmissible. In such case, the prosecution being carried to exclusive decision, the prosecuting authority shall send the court records to the respective chamber for its decision on the prosecution of the charge, unless the accused shall prefer immediate judgment.

ART. 21. The members of the two chambers, on taking their seats, shall take a formal obligation, in public session, to perform their duties faithfully.

ART. 22. During the sessions the senators and deputies shall receive an equal pecuniary salary and mileage, which shall be fixed by Congress at the end of each session for the following one.

ART. 23. No member of the Congress, from the time of his election, can make contracts with the executive power or receive from it any paid commission or employment.

§ 1. Exceptions to this prohibition are:

(1) Diplomatic missions.

(2) Commissions or military commands.

(3) Advancement in rank and legal promotion.

§ 2. No deputy or senator, however, can accept an appointment for any mission, commission, or command mentioned in Nos. 1 and 2 of the preceding paragraph, without the consent of the chamber to which he belongs, when such acceptance would prevent the exercise of his legislative duties, except in case of war or such as involve the honor or integrity of the nation.

ART. 24. No deputy or senator can be president or form part of a directory of any bank, company, or enterprise which enjoys the favors of the Federal Government defined in and by law.

Sole paragraph.—Nonobservance of the provisions of the foregoing article by any deputy or senator shall involve the loss of his seat.

ART. 25. The legislative commission shall be incompatible with the exercise of any other functions during the sessions.

ART. 26. The conditions for eligibility to the national Congress are:

(1) To be in possession of the rights of Brazilian citizenship and to be registered as a voter.

(2) For the Chamber, to have been for more than 4 years a Brazilian citizen; and for the Senate, for more than 6 years. This provision does not include those citizens referred to in No. 4, article 69.

ART. 27. The Congress shall by special legislation declare the cases of electoral incompetency.

Chapter II.—The Chamber of Deputies.

ART. 28. The Chamber of Deputies shall be composed of the representatives of the people, elected by the States and the Federal District by direct suffrage, the representation of the minority being guarantied.

§ 1. The number of the deputies shall be fixed by law in such a way as not to exceed one for each 70,000 inhabitants, and that there shall not be less than four for each State.

§ 2. To this end the Federal Government shall at once order a census to be taken of the population of the Republic, which shall be revised every 10 years.

ART. 29. To the Chamber belongs the initiative in the adjournment of the legislative sessions and in all legislation in regard to taxation, to the determination of the size of the army and navy, in the discussion of propositions from the executive power, and in the decision to proceed or not in charges against the President of the Republic under the terms of article 53, and against the ministers of state in crimes connected with those of the said President.

Chapter III.—The Senate.

ART. 30. The Senate shall be composed of citizens eligible under the terms of article 26 and more than 35 years of age, to the number of three senators for each State and three for the Federal District, chosen in the same manner as the deputies.

ART. 31. The mandate of a senator shall continue for 9 years, and one-third of the Senate shall be renewed every 3 years.

Sole paragraph.—A senator elected in place of another shall exercise his mandate during the remainder of the term of the latter.

ART. 32. The Vice President of the Republic shall be the president of the Senate, where he shall vote only in case of tie, and shall be replaced in case of absence or impediment by the vice president of that body.

ART. 33. The Senate alone shall have the power to try and sentence the President of the Republic and the other federal officers designated by the constitution, under the conditions and in the manner which it prescribes.

§ 1. The Senate, when sitting as a tribunal of justice, shall be presided over by the president of the federal supreme court.

§ 2. It shall not pass sentence of condemnation unless two-thirds of its members be present.

§ 3. It shall not impose other penalties than the loss of office and prohibition from holding any other, without prejudice to the action of ordinary justice against the condemned.

Chapter IV.—Powers of Congress.

ART. 34. The national Congress shall have exclusive power:

(1) To estimate the revenue, and fix the expenditures of the Federal Government annually, and take account of the receipts and expenditures of each financial budget.

(2) To authorize the executive to contract loans and make other operations of credit.

(3) To legislate in regard to the public debt and furnish means for its payment.

(4) To control the collection and disposition of the national revenue.

(5) To regulate international commerce, as well as that of the States with each other and with the Federal District; to establish and regulate the collection of customs duties in the ports, create or abolish warehouses of deposit.

(6) To legislate in regard to navigation of rivers running through more than one State, or through foreign territory.

(7) To determine the weight, value, inscription, type, and denomination of the currency.

(8) To create banks of emission, legislate in regard to this emission and to tax it.

(9) To fix the standard of weights and measures.

(10) To determine definitely the boundaries of the States between each other, those of the Federal District, and those of the national territory with the adjoining nations.

(11) To authorize the Government to declare war, if there be no recourse to arbitration or in case of failure of this, and to make peace.

(12) To decide definitively in regard to treaties and conventions with foreign nations.

(13) To remove the capital of the Union.

(14) To extend aid to the States in the case referred to in article 5.

(15) To legislate in regard to federal postal and telegraph service.

(16) To adopt the necessary measures for the protection of the frontiers.

(17) To fix every year the number of the land and naval forces.

(18) To make laws for the organization of the army and navy.

(19) To grant or refuse to foreign forces passage through the territory of the country to carry on military operations.

(20) To mobilize and make use of the national guard or local militia in the cases designated by the Constitution.

(21) To declare a state of siege at one or more points in the national territory, in the emergency of an attack by foreign forces, or internal disturbance, and to approve or suspend the state of siege proclaimed by the executive power or its responsible agents in the absence of the Congress.

(22) To regulate the conditions and methods of elections for federal offices throughout the country.

(23) To legislate upon the civil, criminal, and commercial laws and legal procedures of the federal judiciary.

(24) To establish uniform naturalization laws.

(25) To create and abolish federal public offices, to fix the duties of the same, and designate their salaries.

(26) To organize the federal judiciary according to the terms of article 55 and the succeeding, section 3.

(27) To grant amnesty.

(28) To commute and pardon penalties imposed upon federal officers for offenses arising from their responsibility.

(29) To make laws regarding Government lands and mines.

(30) To legislate in regard to the municipal organization of the Federal District, as well as to the police, the superior instruction and other services which in the capital may be reserved for the Government of the Union.

(31) To govern by special legislation those points of the territory of the Republic needed for the establishment of arsenals, other establishments or institutions for federal uses.

(32) To settle cases of extradition between the States.

(33) To enact such laws and resolutions as may be necessary for the exercise of the powers belonging to the Union.

(34) To enact the organic laws necessary for the complete execution of the requirements of the Constitution.

(35) To prorogue and adjourn its own sessions.

ART. 35. It shall belong likewise to the Congress, but not exclusively:

(1) To watch over the Constitution and the laws, and provide for necessities of a federal character.

(2) To promote in the country the development of literature, the arts, and sciences, together with immigration, agriculture, manufactures, and commerce, without privileges such as would obstruct the action of the local governments.

(3) To create institutions of higher instruction and of high school education in the States.

(4) To provide for high school instruction in the Federal District.

Chapter V.—Laws and resolutions.

ART. 36. Save the exceptions named in article 27, all bills may originate, indifferently, in the Chamber or in the Senate, and may be introduced by any of their members.

ART. 37. A bill, after being passed in one of the chambers, shall be submitted to the other, and, if the latter shall approve the same, it shall send it to the executive, who, if he approve it, shall sanction and promulgate it.

§ 1. If, however, the President of the Republic shall consider it unconstitutional, or contrary to the good of the nation, he shall refuse his sanction to the same within 10 working days, counted from that on which he received it (the bill), and shall return it, within the same period, to the chamber in which it originated, with his reasons for his refusal.

§ 2. The failure of the executive to signify his disapproval within the above-named 10 days shall be considered as an approval, and in case his sanction be refused after the close of the session of the Congress, the President shall make public his reasons therefor.

§ 3. The bill sent back to the chamber where it originated shall be discussed and voted upon by call of names, and shall be considered as passed if it obtain two-thirds of the votes of the members present; and, in this case, it shall be sent to the other chamber, whence, if it receive the same majority, it shall return, as a law, to the executive to be formally promulgated.

§ 4. The sanction and promulgation shall be effected in the following forms:

(1) "The national Congress enacts and I sanction the following law (or resolution)."

(2) "The national Congress enacts and I promulgate the following law (or resolution)."

ART. 38. If the law be not promulgated by the President of the Republic within 48 hours, in the cases provided for in §§ 2 and 3 of the preceding article, the president of the Senate, or the vice president, if the former shall not do so in the same space of time, shall promulgate it, making use of the following formula: "I, president (or vice president) of the Senate, make known to whomesoever these presents may come, that the national Congress enacts and promulgates the following law (or resolution)."

ART. 39. A bill from one chamber, amended in the other, shall return to the former, which, if it accept the amendments, shall send it, changed to conform with the same, to the executive.

§ 1. In the contrary case, it shall go back to the amending chamber, where the alterations shall be considered as approved, if they receive the vote of two-thirds of the members present; in the latter case, the bill shall return to the chamber where it originated, and there the amendments can be rejected only by a two-thirds vote.

§ 2. If the alterations be rejected by such vote, the bill shall be submitted without them to the approval of the executive.

ART. 40. Bills finally rejected or not approved, shall not be presented again in the same legislative session.

SECTION II.—THE EXECUTIVE POWER.

Chapter I.—The President and Vice President.

ART. 41. The executive power shall be exercised by the President of the United States of Brazil, as elective chief of the nation.

§ 1. The Vice President, elected simultaneously with the President, shall serve in place of the latter in case of impediment and succeed him in case of vacancy in the Presidency.

§ 2. In case of impediment or vacancy in the Vice Presidency, the following officers, in the order named, shall be called to the Presidency: The vice president of the Senate, the president of the Chamber of Deputies, the president of the federal supreme court.

§ 3. The following are the conditions of eligibility to the Presidency or Vice Presidency of the Republic:

(1) Must be a native of Brazil.

(2) Must be in the exercise of political rights.

(3) Must be more than 35 years of age.

ART. 42. In case of vacancy from any cause in the Presidency or Vice Presidency before the expiration of the first 2 years of the Presidential term, a new election shall be held.

ART. 43. The President shall hold his office during 4 years, and is not eligible for reëlection for the next succeeding term.

§ 1. The Vice President who shall fill the Presidency during the last year of the Presidential term shall not be eligible to the Presidency for the next term of that office.

§ 2. On the same day on which his Presidential term shall cease the President shall, without fail, cease to exercise the functions of his office, and the newly elected President shall at once succeed him.

§ 3. If the latter should be hindered or should fail to do so, the succession shall be effected in accordance with §§ 1 and 2 of article 41.

§ 4. The first Presidential term shall expire on the 15th of November, 1894.

ART. 44. On taking possession of his office, the President, in a session of the Congress, or, if it be not assembled, before the federal supreme court, shall pronounce the following affirmation:

"I promise to maintain the federal Constitution and comply with its provisions with perfect loyalty, to promote the general welfare of the Republic, to observe its laws, and support the union, integrity, and independence of the nation."

ART. 45. The President and Vice President shall not leave the national territory without the permission of the Congress, under penalty of loss of office.

ART. 46. The President and Vice President shall receive the salary fixed by the Congress in the preceding Presidential term.

Chapter II.—Election of President and Vice President.

ART. 47. The President and Vice President shall be chosen by direct suffrage of the nation and an absolute majority of the votes.

§ 1. The election shall take place on the 1st day of March in the last year of the Presidential term, and the counting of the votes cast at the different precincts shall at once be made in the respective capitals of the States and in the federal capital. The Congress shall make the count at its first session of the same year, with any number of members present.

§ 2. If none of those voted for shall have received an absolute majority, the Congress shall elect, by a majority of votes of those present, one of the two who, in the direct election, shall have received the highest number of votes. In case of a tie the older shall be considered elected.

§ 3. The manner of the election and of the counting of the votes shall be regulated by ordinary legislation.

§ 4. The relatives, both by consanguinity and by marriage, in the first and second degrees, of the President and Vice President shall be ineligible for the offices of President and Vice President, provided the said officials are in office at the time of the election or have left the office even 6 months before.

Chapter III.—The powers of the executive.

ART. 48. To the President of the Republic shall belong the exclusive right to—

(1) Sanction, promulgate, and make public the laws and resolutions of the Congress; issue decrees, instructions, and regulations for their faithful execution.

(2) Choose and dismiss at will the cabinet officers.

(3) Exercise or appoint some one to exercise supreme command over the land and naval forces of the United States of Brazil, as well as over the local police, when called to arms for the internal or external defense of the Union.

(4) Govern and distribute, under the laws of the Congress, according to the necessities of the National Government, the land and naval forces.

(5) Dispose of the offices, both military and civil, of a federal character, with the exceptions specified in the Constitution.

(6) Pardon crimes and commute penalties for offenses subject to federal jurisdiction, save in the cases mentioned in article 34, No. 28, and article 52, § 2.

(7) Declare war and make peace, under the provisions of article 34, No. 11.

(8) Declare war at once in case of foreign invasion or aggression.

(9) Give an annual statement to the national Congress of the condition of the country, with a recommendation of pressing provisions and reforms, through a message, which he shall send to the secretary of the Senate on the day of the opening of the legislative session.

(10) Convoke the Congress in extra session.

(11) Appoint the federal judges when proposed by the supreme court.

(12) Appoint the members of the federal supreme court and ministers of the diplomatic corps, with the approval of the senate; and, in the absence of the Congress, appoint them in commission until considered by the senate.

(13) Appoint the other members of the diplomatic corps and consular agents.

(14) Maintain relations with foreign states.

(15) Declare, directly, or through his responsible agents, a state of siege at any point of the national territory, in case of foreign aggression or serious internal disturbance. (Article 6, No. 3; article 34, No. 21; and article 80.)

(16) Set on foot international negotiations, celebrate agreements, conventions, and treaties, always *ad referendum* to the Congress, and approve those made by the States in conformity with article 65, submitting them when necessary to the authority of the Congress.

Chapter IV.—Cabinet ministers.

ART. 49. The President of the Republic shall be assisted by the ministers of state (cabinet officers), agents of his confidence, who sign the acts and preside over their respective departments into which the federal administration is divided.

ART. 50. The cabinet ministers shall not exercise any other employment or function of a public nature, be eligible to the Presidency or Vice Presidency of the Union, or be elected deputy or senator.

Sole paragraph.—Any deputy or senator, who shall accept the position of cabinet minister, shall lose his seat in the respective chamber, and a new election shall at once be held, in which he shall not be voted for.

ART. 51. The cabinet ministers shall not appear at the sessions of the Congress, and shall communicate with that body in writing only or by personal conference with the committees of the chambers.

The annual report of the ministers shall be addressed to the President of the Republic, and distributed to all the members of the Congress.

ART. 52. The cabinet ministers shall not be responsible to the Congress or to the courts for advice given to the President of the Republic.

§ 1. They shall be responsible, nevertheless, with respects to their acts, for crimes defined in the law.

§ 2. For common crimes and those for which they are responsible they shall be prosecuted and tried by the federal supreme court, and for those committed jointly with the President of the Republic, by the authority competent to judge this latter.

Chapter V.—The responsibility of the President.

ART. 53. The President of the United States of Brazil shall be brought to trial and judgment, after the Chamber of Deputies shall have decided that he should be tried on the charges made against him, in the federal supreme court, in the case of common crimes, and in those of responsibility, in the Senate.

Sole paragraph.—As soon as it shall be decided to try him on the charges brought, the President shall be suspended in the exercise of the duties of his office.

ART. 54. Crimes of responsibility on the part of the President of the Republic are such as are directed against—

(1) The political existence of the Union.
(2) The Constitution and the form of the Federal Government.
(3) The free exercise of the political powers.
(4) The legal enjoyment and exercise of political or individual rights.
(5) The internal security of the country.
(6) The purity of the administration.
(7) The constitutional keeping and use of the public funds.
(8) The financial legislation enacted by the Congress.

§ 1. These offenses shall be defined in a special law.

§ 2. Another law shall provide for the charges, the trial, and the judgment.

§ 3. Both these laws shall be enacted in the first session of the first Congress.

SECTION 3.—THE JUDICIARY.

ART. 55. The judicial power of the Union shall be lodged in a federal supreme court, sitting in the capital of the Republic, and as many inferior federal courts and tribunals, distributed through the country, as the Congress shall create.

ART. 56. The federal supreme court shall be composed of fifteen justices, appointed under the provisions of article 48, No. 12, from among the oldest thirty citizens of well-known knowledge and reputation who may be eligible to the Senate.

ART. 57. The federal justices shall hold office for life, being removable solely by judicial sentence.

§ 1. Their salaries shall be fixed by law of the Congress, and can not be diminished.

§ 2. The Senate shall try the members of the federal supreme court for crimes of responsibility, and this latter the lower federal judges.

ART. 58. The federal courts shall choose their presidents from among their own members, and shall organize their respective clerical corps.

§ 1. In these corps the appointment and dismissal of the respective clerks, as well as the filling of the judicial offices in the respective judicial districts, shall belong to the presidents of the respective courts.

§ 2. The President of the Republic shall appoint from among the members of the federal supreme court the attorney-general of the Republic, whose duties shall be defined by law.

ART. 59. To the federal supreme court shall belong the duty of—

(1) Trying and judging by original and exclusive jurisdiction—

(*a*) The President of the Republic for common crimes, and the cabinet ministers in the cases specified in article 52.

(*b*) The ministers of the diplomatic corps for common crimes and those of responsibility.

(*c*) Cases and disputes between the States and the Union, or between the States one with another.

(*d*) Disputes and claims between foreign states and the Union, or between foreign nations and the States.

(*e*) Conflicts between the federal courts one with another, or between these and those of the States, as well as those between the courts of one State and those of another.

(2) Deciding, on appeal, questions pronounced upon by the lower federal courts and tribunals, as well as those mentioned in § 1 of the present article and in article 60.

(3) Reviewing the proceedings of finished trials, under the provisions of article 81.

§ 1. Decisions of State courts in last appeal can be carried to the federal supreme court—

(*a*) When the validity or application of the federal laws or treaties is called in question and the decision of the State court shall be against the same.

(*b*) When the validity of laws or acts of the governments of the States in respect to the Constitution or of the federal laws is contested and the State court shall have decided in favor of the validity of the acts or laws in question.

§ 2. In the cases which involve the application of the laws of the States, the federal court shall consult the jurisprudence of the local tribunals, and, *vice versa*, the State court shall consider that of the federal tribunals when the interpretation of the laws of the Union is involved.

ART. 60. It shall belong to the federal courts to decide—

(*a*) Cases in which the plaintiff or the defendant shall rest the case on some provision of the federal Constitution.

(*b*) All suits brought against the Government of the Union or the national treasury based on constitutional provisions, on the laws and regulations of the executive power, or on contracts made with the said Government.

(*c*) Suits arising from compensations, claims, indemnification of damages, or any others whatsoever brought by the Government of the Union against private individuals, and *vice versa*.

(*d*) Litigations between a State and the citizens of another, or between citizens of different States having differences in their laws.

(*e*) Suits between foreign states and Brazilian citizens.

(*f*) Actions begun by foreigners, and based either on contracts with the Federal Government or on conventions or treaties of the Union with other nations.

(*g*) Questions of maritime law and navigation, whether on the sea or on the rivers and lakes of the country.

(*h*) Questions of international law, whether criminal or civil.

(*i*) Political crimes.

§ 1. Congress is forbidden to commit any part of the federal jurisdiction to the State courts.

§ 2. Sentences and orders of the federal judges will be executed by federal court officers, and the local police shall assist them when called upon by the same.

ART. 61. The decisions of the State courts or tribunals in matters within their competence shall put an end to the suits and questions, except as to (1) habeas corpus, or (2) effects of a foreigner deceased in cases not provided for by convention or treaty. In such cases there shall be voluntary recourse to the federal supreme court.

ART. 62. The State courts shall not have the power to intervene in questions submitted to the federal tribunals, or to annul, alter, or suspend the sentences or orders of these latter; and, reciprocally, the federal judiciary can not interfere in questions submitted to the State courts, or annul, alter, or suspend their decisions or orders, except in the cases provided in this Constitution.

TITLE II.—THE STATES.

ART. 63. Each State shall be governed by the constitution and laws which it shall adopt, respect being observed for the constitutional principles of the Union.

ART. 64. The unexplored mines and wild lands lying within the States shall belong to these States respectively; and to the Union only as much territory as may be necessary for the defense of the frontiers, for fortifications, military works, and federal railways.

Sole paragraph.—The national properties, not necessary for the service of the Union, shall pass to the domain of the States in whose territory they may be situated.

ART. 65. The States shall have the right to—

(1) Conclude agreements and conventions among themselves, if such be not of a political character. (Article 48, No. 16.)

(2) Exercise in general any and every power or right not denied expressly by the Constitution, or implicitly in its express terms.

ART. 66. It is forbidden to the States to—

(1) Refuse to recognize public documents of the Union, or of any of the States, of a legislative, administrative, or judicial character.

(2) Reject the currency or notes issued by banks, which circulate by act of the Federal Government.

(3) Make or declare war, one with another, or make reprisals.

(4) Refuse the extradition of criminals demanded by the justice of other States, or of the Federal District, in conformity with the laws of Congress which relate to this subject. (Article 41, No. 32.)

ART. 67. Save the restrictions specified in the Constitution, and the federal laws, the Federal District shall be governed directly by the municipal authorities.

Sole paragraph.—Expenses of a local character in the capital of the Republic must be provided for exclusively by the municipal authorities.

TITLE III.—THE MUNICIPALITY.

ART. 68. The States shall organize themselves in such a manner as to assure the autonomy of the municipalities in everything that concerns their peculiar interests.

TITLE IV.—BRAZILIAN CITIZENSHIP.

SECTION I.—QUALIFICATIONS.

ART. 69. The following shall be Brazilian citizens:

(1) Natives of Brazil, though of foreign parentage (father), provided he be not in the service of his nation.

(2) Sons of a Brazilian father, and illegitimate sons of a Brazilian mother, born in foreign parts, if they take up their residence (domicile) in the Republic.

(3) Sons of a Brazilian father who may be in another country in the service of the Republic, although they do not make their domicile in Brazil.

(4) Foreigners, who, being in Brazil on the 15th of November, 1889, shall not declare, within 6 months from the time when the Constitution enters into force, their desire to preserve their original nationality.

(5) Foreigners who possess property (real estate) in Brazil and are married to Brazilian women, or have Brazilian children, provided they reside in Brazil, unless they shall declare their intention of not changing their nationality.

(6) Foreigners naturalized in any other way.

ART. 70. Citizens of more than 21 years of age, and registered according to law, shall be electors.

§ 1. The following shall not be registered as electors for federal or State elections:

(1) Beggars.

(2) Persons ignorant of the alphabet.

(3) Soldiers on pay, except alumni of the military schools of higher instruction.

(4) Members of monastic orders, companies, congregations, or communities of whatsoever denomination, who are subject to vows of obedience, rule, or statute, which implies the surrender of individual liberty.

§ 2. Citizens who can not be registered shall not be eligible.

ART. 71. The rights of the Brazilian citizen can be suspended or lost only in the following cases:

§ 1. The rights may be suspended—

(*a*) For physical or moral incapacity.

(*b*) For criminal conviction, during the operation of the sentence.

§ 2. They may be lost—

(*a*) By naturalization in a foreign country.

(*b*) By acceptance of employment or pension from a foreign power, without permission of the federal executive.

§ 3. The means of reacquiring lost rights of the Brazilian citizen shall be specified by federal law.

SECTION II.—DECLARATION OF RIGHTS.

ART. 72. The Constitution secures to Brazilians and foreigners residing in the country the inviolability of their rights touching individual liberty, and security, and property, in the following terms:

§ 1. No person shall be forced to do, or leave undone, anything whatever, except by virtue of law.

§ 2. Before the law all persons are equal. The Republic does not recognize privileges of birth, or titles of nobility, and abolishes all existing honorary orders, with all their prerogatives and decorations, as well as all hereditary and conciliar titles.

§ 3. All persons and religious professions may exercise, publicly and freely, the right of worship, and may associate themselves for that purpose, acquire property, observance being had to the provisions of the common law.

§ 4. The Republic recognizes only the civil marriage, the celebration of which shall be gratuitous.

§ 5. The cemeteries shall be secular in character, and be managed by the municipal authorities, being free to all religious sects for the exercise of their respective rites as regards their members, provided they do not offend public morals or the laws.

§ 6. The instruction given in the public institutions shall be secular.

§ 7. No sect or church shall receive official aid, nor be dependent on, nor connected with, the Government of the Union, or of the States.

§ 8. All persons have the right of free association and assembly, without arms; and the police force shall not intervene, except to maintain the public order.

§ 9. Any person whatsoever shall have the right to address, by petition, the public powers, denounce abuses of the authorities, and appeal to the responsibility of the accused.

§ 10. In time of peace any person may, without passport, enter or leave the territory of the Republic, with his fortune and goods, whenever and however he may choose.

§ 11. The house is the inviolable asylum of the person; no one can enter it at night without the consent of the inhabitant, except to aid the victims of a crime or disaster; nor by day, unless in the cases and in the form prescribed by law.

§ 12. The expression of opinion shall be free, in respect to whatever subject, through the press or through the tribune, without subjection to censorship, each one being responsible for the abuses he may commit, in the cases and in the form prescribed by law. Anonymous publications are forbidden.

§ 13. Cases of *flagrante delicto* alone excepted, no arrest shall be made, unless after declaration of the charge (save in cases determined by law), and by written order of the competent authorities.

§ 14. No person shall be kept in prison without charge formally made, save the exceptions mentioned in the law, or taken to prison, or detained there, if he give bail, in cases where such is lawful.

§ 15. No person shall be condemned, except by competent authority, and in virtue of law already existing and in the form prescribed by it.

§ 16. The law shall secure to the accused the fullest defense by all the recourses and means essential to the same, including the notice of the charge, delivered to the prisoner within 24 hours and signed by the proper authority along with the names of the accusers and witnesses.

§ 17. The rights of property are maintained in all their plentitude, and no disappropriation shall be made, except from necessity or public utility, and indemnity shall, in such cases, be made beforehand. Mines belong to the owners of the soil, under the limitations to be established by the law to encourage the development of this branch of industry.

§ 18. Correspondence under seal is inviolable.

§ 19. No penalty shall extend beyond the person of the delinquent.

§ 20. The penalty of the galleys is abolished, as also judicial banishment.

§ 21. The death penalty is abolished, except in the cases under military law in time of war.

§ 22. The habeas corpus shall always be granted when the individual suffers violence or compulsion, through illegality or abuse of power, or considers himself in imminent danger of the same.

§ 23. There shall be no privileged tribunal, except in such cases as, from their nature, belong to special courts.

§ 24. The free exercise of any profession, moral, intellectual, or industrial, is guarantied.

§ 25. Industrial inventions belong to their authors, to whom the law will grant a temporary privilege, or to whom the Congress will give a reasonable premium, when it is desirable to make the invention public property.

§ 26. To authors of literary and artistic works is guarantied the exclusive right of reproducing them through the press or by any other mechanical process, and their heirs shall enjoy this same right during the space of time determined by the law.

§ 27. The law shall also secure the rights of property in trade-marks.

§ 28. No Brazilian can be deprived of his civil and political rights on account of religious belief or duty, nor be exempted from the performance of any civic duty.

§ 29. Those who shall claim exemption from any burden imposed by the laws of the Republic on its citizens, on account of religious belief, or who shall accept any foreign decoration or title of nobility, shall lose all their political rights.

§ 30. No tax of any kind shall be collected except in virtue of a law authorizing the same.

§ 31. The institution of trial by jury is maintained.

ART. 73. Public offices, civil or military, are accessible to all Brazilian citizens, always observing the conditions of particular capacity fixed by the law; but the accumulation of remunerations is forbidden.

ART. 74. Commissions, offices, and positions not subject to removal are guarantied in all their plenitude.

ART. 75. Only such public officials as have become infirm in the service of the nation shall be retired on pay.

ART. 76. Officers of the army and navy shall lose their commissions only in case of condemnation to more than 2 years in prison, pronounced in judgment by the competent tribunals.

ART. 77. There shall be a special court for the trial of military offenses committed by soldiers or marines.

§ 1. This court shall be composed of a supreme military tribunal, whose members shall hold their seats for life, and of the councils necessary for the formulation of the charge and the judgment of the crimes.

§ 2. The organization and powers of the supreme military tribunal shall be determined by law.

ART. 78. The enumeration of the rights and guaranties expressed in the Constitution does not exclude other guaranties and rights, not enumerated, but resulting from the form of government established and principles settled by said Constitution.

TITLE V.—GENERAL PROVISIONS.

ART. 79. The citizen vested with the functions of either of these three federal powers shall not exercise those of another.

ART. 80. Any part of the territory of the Union may be declared in state of siege, and the constitutional guaranties suspended for a determined period, whenever the security of the Republic so demands in case of foreign aggression or intestine disturbance. (Article 34, No. 21.)

§ 1. The power to execute the above provision may, if the Congress be not in session and the country be in imminent peril, be used by the federal executive. (Article 48, No. 15.)

§ 2. In the exercise of this power, during the state of siege, the executive shall be restricted to the following measures of repression against persons:

(1) To their detention in a place not allotted to persons accused of common crimes.

(2) To banishment to other parts of the national territory.

§ 3. As soon as the Congress shall have assembled, the President of the Republic shall make a report to that body of the exceptional measures which may have been taken.

§ 4. The authorities who shall have ordered such measures shall be responsible for any abuses that may have been committed.

ART. 81. In criminal cases, trials concluded may be reviewed at any time, in favor of the condemned parties, by the federal supreme court, for the purpose of correcting or of confirming the sentence.

§ 1. The law shall determine the cases and the form of such revision, which may be asked for by the condemned, by any one of the people, or by the attorney-general of the Republic, *ex officio*.

§ 2. In such revision the penalties imposed by the sentence reviewed can not be increased.

§ 3. The provisions of the present article are applicable to military trials.

ART. 82. Public officers shall be strictly responsible for the abuses and omissions that occur in the exercise of the duties of their offices, as well as for the indulgences and negligences for which they do not hold their subordinates responsible.

Sole paragraph.—They shall all be bound by formal obligation, on taking possession of their offices, to discharge the lawful duties of the same.

ART. 83. Until revoked, the laws of the *ancien régime* shall remain in force, in as far as they are not, explicitly or implicitly, contrary to the system of government established by the Constitution, and to the principles laid down in the same.

ART. 84. The Federal Government guaranties the payment of the public debt, both internal and foreign.

ART. 85. The officers of the line and of the annexed classes of the navy shall have the same commissions and advantages as those of the army of corresponding rank.

ART. 86. Every Brazilian shall be bound to military service in defense of the country and the Constitution, as provided by the federal laws.

ART. 87. The federal army shall be made up of contingents which the States and the Federal District are bound to furnish, constituted in conformity with the annual law regulating the number of the forces.

§ 1. The general organization of the army shall be determined by a federal law, in accordance with No. 18 of article 34.

§ 2. The Union shall have charge of the military instruction of the troops and of the higher military instruction.

§ 3. Compulsory recruiting for military purposes is abolished.

§ 4. The army and navy shall be made up by volunteering without bounties, or, if this means be not sufficient, by lot previously determined.

The crews for the navy shall be made up from the naval school, the schools of marine apprentices, and the merchant marine, by means of lot.

ART. 88. In no case, either directly or indirectly, alone or in alliance with another nation, shall the United States of Brazil engage in a war of conquest.

ART. 89. A tribunal of accounts shall be instituted for the auditing of the receipt and expense accounts and examining into their legality before their presentation to the Congress. The members of this tribunal shall be appointed by the President of the Republic, with the approval of the Senate, and can lose their seats only by sentence.

ART. 90. The Constitution may be amended, at the initiative of the national Congress, or of the legislatures of the States.

§ 1. An amendment shall be considered as proposed, when, having been presented by one-fourth, at least, of the members of either house of the Congress, it shall have been accepted in three readings (discussions) by two-thirds of the votes in both houses of the Congress, or when it shall have been asked for by two-thirds of the States represented, each one by a majority of the votes of its legislature, said votes to be taken in the course of 1 year.

§ 2. The proposed amendment shall be considered approved, if, in the following year, after three discussions, it shall have been adopted by a majority of two-thirds of the votes in the two houses of Congress.

§ 3. The amendment adopted shall be published with the signatures of the presidents and clerks of the two chambers, and be incorporated into the Constitution as a part of the same.

§ 4. No project having a tendency to abolish the federative republican form, or the equal representation of the States in the Senate, shall be admitted for consideration in the Congress.

ART. 91. This Constitution, after approval, shall be promulgated by the president of the Congress and signed by the members of the same.

TEMPORARY PROVISIONS.

ARTICLE 1. After the promulgation of this Constitution, the Congress, in joint assembly, shall choose consecutively, by an absolute majority of votes in the first balloting, and, if no candidate shall receive such, by a plurality in the second balloting, the President and Vice President of the United States of Brazil.

§ 1. This election shall be in two distinct ballotings, for the President and Vice President respectively, the ballots for President being taken and counted, in the first place, and afterwards for Vice President.

§ 2. The President and Vice President, thus elected, shall occupy the Presidency and Vice Presidency of the Republic during the first Presidential term.

§ 3. For said election there shall be no incompatibilities admitted.

§ 4. As soon as said election shall be concluded, the Congress shall consider as terminated its mission in joint session and, separating into Chamber and Senate, shall enter upon the exercise of its functions as defined by law, on the 15th of June of the present year, and can not in any case be dissolved.

§ 5. In the first year of the first legislature, among its preparatory measures, the Senate shall designate the first and second third of its members, whose term of office shall cease at the end of the first and second 3-year terms.

§ 6. The discrimination shall be made in three lists, corresponding to the three classes, alloting to them the senators of each State and of the Federal District according to the number of votes received by them respectively, so as to allot to the third for the last 3 years the one receiving the highest number of votes in the Federal District and in each State, and to the other two-thirds the remaining two names in the order of the number of votes received by them respectively.

§ 7. In case of tie, the oldest shall be preferred, and if the ages are equal, the choice shall be made by lot.

ART. 2. The State which, by the end of the year 1892, shall not have adopted its constitution, shall, by act of the federal legislative power, be placed under that of one of the other States, which it shall judge most suitable, until the State thus subjected to said constitution shall amend it in the manner provided in the same.

ART. 3. As fast as the States shall be organized, the Federal Government shall deliver to them the administration of the services which belong to them, and shall settle the responsibility of the federal administration in all that relates to said services and to the payment of the respective officials.

ART. 4. While, during the period of organization of their services, the States shall be engaged in regulating their expenses, the Federal Government shall, for this purpose, open special credits to them, under conditions determined by the Congress.

ART. 5. In the States which shall become organized the classification of the revenues established in the Constitution shall enter into force.

ART. 6. In the first appointments for the federal magistracy and for that of the States, the preference shall be given to the justices and magistrates of the higher courts of the greatest note. Such as are not admitted into the new organization of the judiciary, and have served 30 years, shall be retired on full pay. Those who have served for less than 30 years shall continue to receive their salaries until they shall be employed, or retired with pay corresponding to their length of service. The payment of salaries of magistrates retired or set aside shall be made by the Federal Government.

ART. 7. To D. Pedro de Alcantara, ex-Emperor of Brazil, a pension is granted, to run from the 15th of November, 1889, sufficient to guaranty him a decent subsistence during his lifetime. The Congress, at its first session, shall fix the amount of said pension.

ART. 8. The Federal Government shall acquire for the nation the house in which Dr. Benjamin Constant Botelho de Magalhães died, and shall have placed on it a memorial slab in memory of that great patriot, the founder of the Republic.

Sole paragraph.—The widow of the said Dr. Benjamin Constant shall have, during her lifetime, the usufruct of the said house.

We order, then, all the authorities to whom the recognition and execution of this Constitution belongs, to execute it and have it executed and observed faithfully and fully in all its provisions.

Let the same be published and observed throughout the territory of the nation.

Hall of the sessions of the National Constitutional Congress, in the city of Rio de Janeiro, in the year 1891, and the third of the Republic.

TARIFF CHANGES AND TRADE IN SENEGAL.

REPORT BY CONSUL STRICKLAND, OF GORÉE-DAKAR.

I have the honor to bring to your notice that on the first day of this current year a new schedule of duties began to take effect in this colony, some of the provisions of which are not favorable to foreigners.

Previous to January 1, 1891, the duties levied on most articles of merchandise, foreign and French alike, were at the rate of 5 per cent. ad valorem, the value not always being estimated from invoices, but according to the "mercuriale" periodically fixed by a commission appointed for the purpose. This rate of 5 per cent. still applies to articles of French production, whether manufactured or otherwise, but 7 per cent. additional is now levied on most articles of foreign production.

There are a few articles the duties on which are arranged in a manner something different, and leaf tobacco is one. The duty on this article has

been raised from 15 centimes to 45 centimes per kilogramme, and in anticipation of this great change those merchants here who could supplied themselves largely from Europe during November and December, thus saving to themselves for months to come the augmentation of duty.

Another article which does not come under the first-mentioned arrangement is a kind of blue cotton fabric, called "guinea," of which enormous quantities are used in Africa. This has been produced hitherto in England and in Belgium and is an important branch of industry in both those countries. On this the new duties seem quite prohibitive; while only 2½ centimes per metre are to be levied on guinea, if of French manufacture, 31 centimes per metre, if of foreign manufacture.

The duties on other articles not included in the 7 per cent. schedule (12 per cent. altogether) are as follows: Munitions of war, 15 per cent.; cocoanuts, 50 centimes per kilogramme.

That the new duties, especially if they are continued long without modification, will somewhat injure the rapidly growing American trade in this colony there can be no doubt. Some articles have been introduced against much prejudice and opposition, but have steadily won their way into favor in spite of all. A difference of 7 per cent. in price against many of them, however, could not at present be borne, and such articles will undoubtedly be pretty much withheld from this market. But articles which France does not produce must, after present stocks get reduced, commence to come again, though less by the direct route and in somewhat reduced quantities. It is the natives, of course, who will have to pay the extra-laid duties, hence the less quantity that will of necessity be imported. And the withdrawal of freight from the small sailing vessels which now come direct must cause some of them to be withdrawn from the business, and so diminish the number of trips. Sudden calls for limited quantities of merchandise which represent value, like leaf tobacco, will then have to be met by the expensive steam route via Liverpool, thus throwing a large share of the carrying trade that will be left into the hands of foreign shipowners.

To illustrate exactly how the new duties are likely to affect Americans, we will take the case of two vessels which arrived in this colony in November last: the *Frank M. Howes* of 169 tons with about 100,000 feet of hard pine lumber from Fernandina, Fla., and the *Kocheco* of 353 tons from New York with 1,275 barrels of flour, 996 barrels of bread, 500 barrels of cotton-seed oil, and 100 half hogsheads of tobacco, with some other articles not necessary to mention, the quantity of each being small. The new duties would not have prevented the voyage of the *Frank M. Howes*, because hard pine lumber is not protected in France; but flour, bread, and oil, which constituted the bulk of the cargo of the *Kocheco*, are staples of that country almost as much as they are of ours; and a discriminating duty of 7 per cent. against them would have been fatal to the voyage of the *Kocheco*, whose tobacco might have come by steam via Liverpool—at more expense, to be sure—but then the *Kocheco* could not have earned a freight with the tobacco alone.

Some of the causes which have induced the French Government to impose discriminating duties against foreign productions are not far to seek. It has at great trouble and expense established a respect for order among the natives, so that life and property are probably as safe here now as in any country.

It has assisted in building a railroad, connected the colony with the outside world by cables, afforded excellent mail and commercial facilities, but the commerce developed does not inure, as it seemingly should, to the benefit of France. The oleaginous products of the country are mostly exported to France, but the French have to pay money for them, while this money is used in purchasing goods procured in the first place from foreigners. England has hitherto furnished most of the cotton fabrics, for the principal reason that Manchester manufacturers will cater to every whim and prejudice of the natives, while French and American manufacturers will not. Germany has at present a monopoly of the liquor traffic, and the United States, since it lost that, has been making up in many other directions. The French are simply maneuvering for what they consider a fair share of the trade of their own colony and propose to exact tribute of all competitors until this is accomplished. It is rumored here that the new arrangement may not be of long continuance; but, however this shall prove, it is certain, I think, to endure long enough to greatly modify the conditions of trade now existing between this country and the United States.

Regular and direct steam communication with New York would go far, I think, to overcome the discriminating duty of 7 per cent., which Americans would keenly feel on some articles now exported by them at great expense for freight and commissions. If such a line could once be stimulated into existence, it would speedily engross all the freight which now comes this way, either direct or otherwise, and through the efforts of American commercial travelers the goods of every American manufacturer would be presented here at their best without the favor of, and without paying a profit of perhaps more than 7 per cent. to, other less interested middlemen.

It is said by the colonists that Americans might manage matters so as to feel the discriminating duties less, perhaps, than other foreigners, and this seems to me true. The great American staples of lumber, petroleum, cotton, cards, tobacco, and cheap furniture will not be seriously affected by the change; and regular steam communication, by enabling flour to be sold in small, fresh lots previous to arrival, thus saving handling and storage expenses, would admit this and many other articles in spite of the present duty, which could not be the case with guinea and many valuable articles exported here by other foreigners, because their goods have come here under the best conditions possible for many years.

Within the last few years I have been besieged with letters from American manufacturers prospecting for an outlet for their goods, but I have been obliged to reply that, owing to the lack of regular and direct steam communication, commercial transactions, the same as have for a long time existed between European manufacturers and dealers here, are quite impracticable.

The expenses of double freight and transshipment in Liverpool would kill any extensive trade attempted in that way.

But in this connection I am only mentioning the desirability of regular and direct steam communication as a means of overcoming the present strained condition of trade. It is also desirable on other grounds, which I propose to treat of fully in a later dispatch.

Concerning the policy of imposing discriminating duties on the goods of foreigners, because they have obtained control of certain parts of the African coast under French control, and the probability that this policy may be imitated by other European nations, among which the greater part of this immense continent is now divided up, it would seem that it can hardly be a matter of indifference to Americans how matters are being manipulated here in the interest of European claimants.

The tendency in manufacturing being ever toward overproduction, does it not follow that the United States, as well as Europe, will soon need the most extensive outlets possible for her manufactured goods? But how can she long have them, or commerce either, if claims in regard to distant new countries are conceded which might make trade with them in products not peculiarly American well-nigh impossible?

These outlets, for obvious reasons, it would seem, should be sought most among people who will not thus manufacture for ages to come. Africa, which might embrace three countries like the United States within its borders and have room for France thrown in, seems much too large a country of the desirable kind to be altogether veiled from our commercial horizon.

PETER STRICKLAND,
Consul.

UNITED STATES CONSULATE,
Gorée-Dakar, February 3, 1891.

FOREIGN GOLD IN THE ARGENTINE REPUBLIC.

REPORT BY CONSUL BAKER, OF BUENOS AYRES.

On the 15th of November, 1881, the Argentine Congress passed a law fixing the monetary unit of the Argentine Republic and providing for the coinage of money at the national mint. The seventh article of the law provided as follows:

ARTICLE 7. The legal circulation of all foreign gold coins shall be prohibited as soon as the gold coinage of the national mint shall reach $8,000,000, and the legal circulation of all foreign silver coins shall be prohibited so soon as the silver coinage of the national mint shall reach $4,000,000. So soon as the coinage of gold and silver shall have reached these amounts, the executive of the nation shall issue a decree fixing a time for the following provisions of law to go into effect, after which all acts, payments, and contracts must be expressed in national money.

On the 5th instant the director of the mint notified the Government that up to that date $30,733,830 in gold coin and $2,805,835 in silver coin had

been turned out from the mint, and President Pelligrini thereupon issued the following decree:

Having been notified officially that the Argentine mint has coined to this date 6,146,551 argentines ($5 pieces) and 430 half argentines ($2.50 pieces), with a total value of $30,733,830 (pesos), and considering that the case provided for in article 7 of the coinage law has been reached, the President of the Republic decrees as follows:

ARTICLE 1. At the expiration of 3 months, dating from this day, there shall be demonetized all foreign gold coin, and its legal circulation is hereby prohibited in the Argentine Republic.

ART. 2. Let this be communicated, etc.

PELLIGRINI.
V. F. LOPEZ.

What the effect of this decree will be remains to be seen. The great bulk of the gold in the country is of foreign coinage, and if its circulation is to be prohibited it must work considerable embarrassment. I assume, however, that this demonetization of foreign gold means no more than that it is no longer legal tender in the payment of debts, but that its value must be stated in Argentine gold, and that it will still be permitted to buy and sell it as an article of merchandise. Indeed, Dr. Pelligrini, the present President, was a Senator in the Argentine Congress at the time the coinage law of 1881 was passed and took part in the discussion. He stated his view of the effect of the law as follows:

Those who suppose that this law will prevent a person from purchasing in foreign money confound the price with the thing. What is prohibited is simply the price stipulated in contracts. This must not be in foreign money. If you wish to buy or sell £1,000 for its equivalent price in national money, the foreign money will represent the subject of the contract. What the law requires is that when money is the price it must be national money, but it does not prevent the buying or selling of Bolivian silver, English pounds sterling, or any other foreign coins. The effect of the law is analogous to that which established the metrical system here and which prohibits legal proceedings based on any other measure.

So I assume that after the date named in the decree, while foreign money can be bought or sold as merchandise, all transactions must be expressed and represented in the money of the country.

E. L. BAKER,
Consul.

UNITED STATES CONSULATE,
Buenos Ayres, December 13, 1890.

EMIGRATION FROM AMSTERDAM TO THE UNITED STATES.

REPORT BY CONSUL SCHLEIER.

The total number of persons—men, women, and children—who emigrated to the United States via the port of Amsterdam during the year 1890 was 6,646. They consisted of 4,149 men, 1,509 women, 767 children, and 221 infants.

The following table shows their nationality:

Nationality.	Number.	Nationality.	Number.
Netherlanders	1,288	Swedes	37
Germans	1,677	Danes	154
English	533	Americans	18
French	24	Turks	13
Belgians	64	Luxemburgers	52
Swiss	100	Finlanders	12
Italians	154	Brazilians	2
Austrians	1,350	Roumanians	8
Hungarians	374	Spaniards	8
Russians	583	Total	6,646
Poles	73		
Norwegians	122		

Table showing the proportion each province contributed to the emigration in 1890.

Provinces.	Men.	Women.	Children 1 to 10 years old.	Infants.	Total.
Groningen	91	57	33	12	193
Friesland	160	110	63	11	344
Drenthe	10	4	3	1	18
Overyssel	19	13	10	2	44
Gelderland	61	27	25	5	118
Utrecht	6	2	.....	.....	8
North Holland	149	89	82	20	340
South Holland	25	10	6	2	43
Zealand	85	55	30	5	175
North Brabant	1	1	.....	.....	2
Limburg	2	1	.....	.....	3
Total	609	369	252	58	1,288

Table showing the emigration in each month of the year 1890 from Amsterdam to the United States.

Months.	Men.	Women.	Children 1 to 10 years old.	Infants.	Total.
January	186	69	31	8	294
February	160	62	26	8	256
March	384	132	68	16	600
April	426	189	135	28	778
May	510	261	180	54	1,005
June	251	82	44	11	388
July	215	63	20	5	303
August	310	121	69	20	520
September	384	112	36	11	543
October	479	143	42	12	676
November	671	227	98	43	1,039
December	173	48	18	5	244
Total	4,149	1,509	767	221	6,646

List of the occupations of emigrants who embarked at the port of Amsterdam for the United States during the year 1890.

Occupation.	Number.	Occupation.	Number.
Actors	1	Locksmiths	7
Bakers	68	Machinists	25
Barbers	14	Maidservants	24
Barkeepers	4	Masons	31
Basket-makers	2	Merchants	209
Blacksmiths	49	Millers	24
Boatmen	3	Milliners	2
Bookbinders	3	Miners	17
Bookkeepers	5	Musicians	8
Book-printers	2	Notaries	1
Brewers	16	Opticians	1
Brush-makers	4	Painters	10
Butchers	62	Paper-hangers	4
Cabinet-makers	26	Photographers	7
Carpenters	94	Plasterers	2
Carriage-makers	3	Plumbers	2
Cigar-makers	20	Preachers	1
Clerks	15	Reporters	2
Coachmen	8	Saddlers	3
Cooks	17	Sculptors	4
Coopers	3	Seamen	73
Coppersmiths	1	Seamstresses	2
Commissionairs	4	Servants	16
Decorators	1	Shepherds	26
Diamond-cutters	14	Shoemakers	72
Druggists	1	Soap-boilers	1
Dyers	14	Stonecutters	11
Engineers	9	Students	2
Engravers	1	Tailors	120
Farmers	991	Tanners	12
Gardeners	24	Teachers	4
Gas-fitters	2	Tinsmiths	12
Glass-blowers	5	Travelers	7
Goldsmiths	2	Trunk-makers	4
Governesses	1	Turners	6
Hatters	3	Typesetters	4
Hair-dressers	5	Waiters	20
Ironmongers	3	Watchmakers	7
Laborers	1,471	Weavers	30
Lithographers	2	All other, not specified	29

Emigrants with and without any trade or occupation are classified as follows: With trade or occupation, 3,816; without trade or occcupation—men, 362; women, 1,480; children, 767; infants, 221.

EMIGRATION TO SOUTH AMERICA.

The total number of persons who emigrated from the port of Amsterdam to South America was 251, of whom there were 153 men, 50 women, 41 children from 1 to 10 years, and 7 infants. They consisted of 104 Netherlanders, 28 Germans, 25 Britons, 34 Belgians, 13 Americans, 3 Austrians, 28 Italians, 2 Danes, 10 Russians, 2 Roumanians, and 2 Spaniards. The number of these emigrants who are stated to have any trade or occupation

was 144; the others consisted of 9 men, 50 women, 41 children, and 7 infants. Of the emigrants reported as having some occupation, there were 37 farmers, 25 farm and other laborers, 20 merchants, and 12 carpenters.

T. M. SCHLEIER,
Consul.

UNITED STATES CONSULATE,
Amsterdam, February 28, 1891.

THE DOCKS OF HULL.

REPORT BY CONSUL DANIELS.

TRADE AND POPULATION.

The port of Hull, or Kingston-upon-Hull, properly speaking, is the third port in the United Kingdom so far as the value of its import and export trade is concerned. Taking the year 1888, the imports and exports of Liverpool amounted to £194,422,336; London (including Queensborough), £188,394,723; Hull, £38,204,112; Glasgow, £25,325,572; Harwich, £16,910,134; Southampton, £14,589,797; Grimsby, £12,157,478; Leith, £11,982,965; Newcastle, £11,621,639; Newhaven, £11,592,813; Goole, £9,346,951; Bristol, £8,627,688; and Cardiff, £7,039,067.

The population of Hull, according to the latest estimate, is 213,833; the area of the borough is 7,901 acres, and its ratable value is £700,279.

THE ALEXANDER DOCK.

Hull possesses a magnificent system of docks, second to none in the country, the most important being the Alexander dock, belonging the Hull and Barnsley Railway and Dock Company, which company was formed in 1880 in order to free the mercantile community of Hull from the monopoly enjoyed by the Hull Dock Company and the Northeastern Railway Company. The total tonnage of the port in 1890 was 3,156,041 tons, and of this amount 2,329,427 tons went into the docks of the Hull Dock Company and 826,614 tons into the Alexander dock. The increase of the tonnage of the port over 1889 was 88,743 tons. Hull is rapidly increasing as a coal port, and during last year the quantity of coal shipped by the Hull Dock Company was 931,130 tons, while the Hull and Barnsley Company shipped about 500,000 tons.

The Alexander dock, which is situated to the east of the town on the fore shore of the River Humber, was commenced in January, 1881, and opened for traffic in July, 1885, the work of construction having only occupied 6 weeks more than the estimated time (the work having been stopped for nearly 5 months, owing to financial reasons), notwithstanding the execution of a considerable amount of work beyond that contemplated in the original contract. The actual work comprised a dock of 46½ acres, with 2 miles of dock walls from 52 to 62 feet in height, two large graving docks connected with the larger dock, a lock 550 feet long and 85 feet wide, dredging an entrance

through the Hebbles shoal, erecting pumping machinery, laying 12 miles of lines of way, the construction of sheds, and various minor works. As 152 acres of the site of the works, out of a total of 206 acres, were below high-water mark and extended considerably below low-water mark, the range at spring tides being 22½ feet, an embankment about 40 feet high and 6,000 feet long had to be constructed to reclaim the required fore shore. As the commencement of the permanent works could not be delayed till the completion of the reclamation embankment, temporary banks were formed to exclude the tide from the site of the north quay wall and graving docks, forming the innermost works, so that these works might be carried on during the progress of the outer bank. The river embankment was meanwhile being proceeded with by excavating a trench 20 feet wide and about 5 feet deep, with a Priestman steam grab along the line of the toe of the bank. This trench, which was carried down to hard gravel or clay, was filled with chalkstone deposited from small vessels. The bank was given a width of about 30 feet at the level of the river bed; above low water it was roughly formed to a slope of 2 to 1 on the face, and it was intended to back it with solid clay or other hard material. Great difficulty, however, was experienced in the carrying out of this project, and eventually a solid chalk embankment was decided upon, 80 feet wide at the river bed, with a deep-dredged trench 40 feet wide to receive the toe, the chalk being backed with stiff clay for 30 feet in width. This water-tight bank was executed without difficulty, and its seaward face was pitched with Barnsley fan stone to protect the chalk from disintegration by the weather.

The main embankment and a cofferdam in front of the lock entrance were sufficiently completed in June, 1882, for the tide to be excluded from the second reclamation, when the excavations within the reclaimed area were at once utilized for forming the third or eastern reclamation bank, and the tide was finally excluded from the whole site in November, 1882. The cofferdam was segmental in form, with a radius of 255½ feet, and 461 feet long, constructed of two rows of piles 6 feet apart with clay puddle between, the piles being 50 to 60 feet long and driven about 33 feet into the ground, the main piles reaching down to 54 feet below high water. Five sluice openings were made in the cofferdam to allow the tide to flow in and out till the completion of the dam. This part of the work was commenced in June, 1881, and completed in June, 1882, and contained 67,702 cubic feet of timber. As soon as the cofferdam was closed and the second reclamation made secure, the inner bank was broken through, and the excavations were pushed forward with the object of reaching the lock, and work was also commenced at the southern end of the lock and several other places. The southern portion of the site of the dock was covered with warp, or river mud, which was stiff and sticky inshore, but softer further out, and, though drying on the surface when reclaimed, remained quite soft below for a long time. This mud varies in thickness up to 27 feet, and below it beds of warp, sand, gravel, clay, and peat were met with in no definite order.

The roads over this thick bed of soft mud had to be laid with two and sometimes three thicknesses of close timber and sleepers, and the passage of a locomotive over these was accompanied by a distinct undulation. Two hydraulic navvies, built by Sir W. G. Armstrong & Co., were used on the works, and for these and other purposes the contractors were allowed to use the hydraulic engines of 300 indicated horse-power, which were afterwards to serve the dock.

Electric light was employed at night for expediting the work. The dock wall was designed to be founded 12 feet below the dock bottom, at which depth it was anticipated hard clay would be found. Where the clay was at a suitable level, the foundations were carried down to it in a trench timbered in the ordinary manner; but, as much of the clay was at a lower level, the foundations at these points were for the most part inclosed between sheet piling, tongued and grooved, and the walls founded at the designed level. The site for the graving docks was inclosed with grooved and tongued sheet piling driven into the clay, and the work commenced at the designed levels irrespective of the nature of the stratum reached. The foundations of the lock were designed to be laid 48½ feet below high water, or 32½ feet below the level of the mud. Piles 40 feet long were driven at the back of the trench and half timbers in front.

Several "blows" occurred during the construction of the lock, and they caused considerable difficulty; but the whole of the foundations were rendered secure in September, 1884. The lock is 85 feet wide and 550 feet long, having three pairs of gates, and it is subdivided by the middle pair into two locks 325 feet and 225 feet in length, which enables the lock to be used for moderate-sized vessels for long periods before and after high water without a great loss of water, a point of much importance, as the water level in the dock is principally maintained by pumping from a fresh-water stream.

The gates, which are 40 feet high and 50 feet wide, are of "green heart" and segmental in form, with each leaf constructed in three panels, and they were built on the works. There are no sluices in the gates, the filling and emptying of the lock being done through 5-foot culverts, two pairs of which are built in the lock walls at each sill at low-water level. The gates, capstans, and swing bridge are moved by hydraulic machinery. As the two outer sills are 1½ feet deeper than the inner one, the gates are made to correspond, and, whereas each leaf of the inner gates weighs 170 tons, each leaf of the outer pair weighs 176 tons. The roller path is of cast steel, most carefully and accurately bedded on granite.

The depth of water on the sills is scarcely ever less than 28 feet, and since the opening of the dock the greatest draft of any vessel that has entered has not exceeded 27 feet.

The dock walls were designed to be constructed with ashlar stone on the face and rubble chalk backing from dock bottom up to 14 feet below the coping. A strike of the masons, however, whilst the work was in progress led to the substitution of Portland cement concrete for the ashlar and chalk.

The upper portion of the wall, 14 feet high, was built of stone, with ashlar facework projecting 6 inches beyond the lower part of the wall, thus forming a fender and granite coping.

The graving docks were constructed of masonry throughout. The larger dock is 550 feet long on the blocks, but could take a vessel of somewhat larger keel. Its entrance is 65 feet wide, and, having a depth of 21½ feet at high water, it is available for larger vessels. The other is 500 feet long, with an entrance 60 feet wide. The pumping station for emptying the docks is placed between the two docks, and there is a 5-foot pipe culvert leading from the Holderness drain into a chamber at the north end of the building.

On the opposite side of this chamber is another culvert, fitted with a sluice valve to shut off the waters of the Holderness drain at any time; this culvert, in passing to the pump well, is joined by a transverse culvert from each graving dock. There are two vertical Gwynne centrifugal pumps, with 4-foot suctions, worked by direct-acting horizontal condensing engines, supplied with steam from six Lancashire boilers with Galloway tubes. Each pump, making 145 revolutions per minute, throws 31,250 gallons per minute, with a maximum difference of level of 21 feet.

A single pump empties the larger dock from high-water spring-tide level in 3¼ hours, and the two pumps working together can raise the water in the dock 1 foot in 3¼ hours.

Dredging forms a heavy charge in the maintenance of the old Hull docks, owing to the free access into them of the very muddy waters of the Humber near high water for 2 or 3 hours each tide, at tides approaching springs occasionally making up 3 feet difference of level. The deposit introduced in the docks from the Humber amounts sometimes to 1,250,000 tons of mud in the year, necessitating the employment of a large dredging plant for its removal.

To obviate as far as possible the necessity for this dredging in the Alexandra dock, fresh water is pumped up into the dock from the Holderness drain to maintain its level. This drain is a fresh-water stream, draining a large portion of the Holderness division of Yorkshire, which has its outfall adjacent to the Alexandra dock, and the pumps can raise 14,500,000 cubic feet of water from it in 24 hours, thus greatly benefiting the drainage of the surrounding low-lying country, as well as reducing the cost of maintenance of the dock.

The entrance channel was completed by July 16, 1885, when the first steamers entered the dock. The navigable channel of the Humber approaches close to the northern shore in front of Hull, but at the Alexandra dock the northern edge of the deep channel was 960 feet from the outer dock sill. A shoal known as the Hebbles extended half a mile above and 2 miles below the Alexandra dock, and to form the entrance channel 35 acres of this shoal were dredged away from an average depth of 3 to 6 feet down to 12 or 14 feet low-water spring tide.

A timber wharfing lines the side of the trumpet entrance to the lock and extends for a length of 300 feet up and down the river. It is constructed in "bayes" 10 feet apart generally and 3 feet only at the corners, braced transversely and longitudinally, and covered with a 5-inch decking.

The storage accommodation at the dock consists of 6 wooden warehouses, 2 brick warehouses, and 5 corrugated-iron warehouses. There is enormous accommodation for goods in transit and permanent storage accommodation for 65,000 quarters, together with large cellarage for oil and bacon. The dock is equipped with 3 hydraulic coal-shipping appliances similar to those in use in South Wales, capable of shipping 370 tons per hour; 1 100-ton steam crane, 1 25-ton steam crane, 1 15-ton hydraulic crane, 2 10-ton hydraulic cranes, 1 5-ton steam traveling crane, 1 3-ton steam traveling crane, 24 30-cwt. portable hydraulic cranes, 12 hydraulic jiggers, and 8 20-cwt. fixed hydraulic cranes.

The gross cost of the works was £1,355,392, or £12,147 per acre, including two graving docks and equipment. Without equipment the cost was £21,450 per acre. The total cost of the walls, including certain foundations for coal-hoisting and all the subsidiary works round the walls, was £312,224, or about £28 per lineal foot. The cost per superficial foot of the lock gates was 48*s*. The cost of the two graving docks, including the pumping station and pumps, was £130,800. The cost of the lock entrance, including gates, was £138,200, but this amount included all the cost of the "blow." The dock was designed and carried out by Mr. James Abernethy, past president, C. E., and Messrs. Oldham and Bohn, C. E., were the acting engineers at Hull; Mr. A. C. Hurtzic, C. E., was the resident engineer; Messrs. Lucas & Aird were the contractors.

THE HULL DOCK COMPANY.

The Dock Company at Kingston-upon-Hull (the old dock company) was incorporated by act of Parliament in the year 1774, its estate at present comprising eight docks and three timber ponds, having a total area of 410 acres, of which 270 acres are land and the remainder water.

The estate also includes 24 grain warehouses with a storage capacity for 340,000 quarters, 4 guano warehouses, 7 general storage warehouses, 2 graving docks; 2 patent slips, let to Earl's Shipbuilding and Engineering Company (limited); 4 quick-shipping coal tips and hoists, 14 cranes and machinery with a lifting capacity of from 5 to 45 tons each, 1 pair of sheerlegs with a lifting capacity of 100 tons, and 125 fixed power and hand cranes with a lifting capacity of from 1 to 10 tons each.

The company also possesses extensive deal yards, including those on the Citadel estate at the Victoria dock, the latter alone being 47 acres in extent; a dispatch warehouse specially constructed for the rapid discharge of East Indian and other grain and seed cargoes, an extensive fish platform at the St. Andrew's dock, and 72 acres of land westward of the St. Andrew's dock available for dock extension. The company has obtained powers to con-

struct a new entrance to the Albert dock to accommodate the deepest-drafted vessels entering the port.

The following are particulars with regard to the Dock Company's estate:

Queen's dock.—Opened 1779; water area, 10 acres 1 rood 11 perches; depth of water on sill, average spring tides, 20 feet 6 inches.

Humber dock.—Opened 1809; water area, 9 acres 2 roods 3 perches; depth of water on sill, 26 feet 6 inches.

Princess's dock.—Opened 1829; water area, 6 acres 5 perches; depth of water on sill, 20 feet 5 inches.

Railway dock.—Opened 1846; water area, 2 acres 3 roods 9 perches; depth of water on sill, 26 feet 6 inches.

Victoria dock.—Opened 1850; water area, 23 acres 4 perches; depth of water on sill, 27 feet 6 inches.

Albert dock.—Opened 1869; water area, 24 acres 2 roods 18 perches; depth of water on sill, 28 feet 3 inches.

Sir William Wright dock.—Opened 1880; water area, 5 acres 3 roods 37 perches; depth of water on sill, 28 feet 3 inches.

St. Andrew's dock.—Opened 1883; water area, 10 acres 2 roods 10 perches; depth of water on sill, 28 feet 11 inches.

BYRON G. DANIELS,
Consul.

UNITED STATES CONSULATE,
Hull, March 6, 1891.

AMERICAN TRADE AT PUERTO CABELLO.

REPORT BY CONSUL RILEY.

On the 13th of January the steamship *Philadelphia*, of the Red D line of Wilmington, Del., arrived at this port heavily laden with American products, both agricultural and manufactured, being the balance of the cargo left at Pier 36, East River, New York, by the steamship *Caracas* on the 24th of December, 1890.

On this day the *Philadelphia* arrived at Puerto Cabello from La Guayra, and received on board for New York 6,462 bags of coffee and 1,500 hides. There were ten shippers, making the same number of triplicate invoices.

When I came to this consulate on the 1st of October, 1890, the ships of this line entered the port light and departed in the same condition. At that time the house of Boulton, Bliss & Dallett, New York, talked of withdrawing one of the ships from the line. Now they intend to increase the number from three to six to meet the demands of commerce, improved by the discussion of the principles of reciprocity.

WILLIAM G. RILEY,
Consul.

UNITED STATES CONSULATE,
Puerto Cabello, January 17, 1891.

LINSEED AND RICE IN INDIA.

TRANSMITTED BY CONSUL BALLANTINE, OF BOMBAY.

POONAH, *January 28, 1891.*

The undersigned has the honor to forward herewith a memorandum containing such information on linseed and rice cultivation and trade in India as is available in his office. The memorandum touches on the figures of all India, but, as regards cultivation, deals only with the practice of the Bombay presidency.

E. C. OZANNE,
Director of Agriculture.

LINSEED.

Statistics of the area and outturn of linseed are incomplete. Linseed and wheat are sown and reaped at the same season, and, broadly speaking, occupy the same regions. Linseed is grown for its oil only. The flax contained in the stalk is not utilized as fiber, because, even with thick sowing, the plant is too bushy and stunted in growth. It is sown both pure and mixed (chiefly with wheat), and area, as well as outturn, is most sensitive to the character of the season. If rain falls inopportunely, the crop is very liable to rust; for this reason all attempts to grow it as a rain crop for fiber would probably be fruitless. With the exception of Madras, Mysore, Sindhia, the Punjab, and Assam, every province shares largely in the trade of this oilseed. The harvest of 1888 was average. The following exports to the ports of shipment give a rough idea as to the average outturn in the different provinces of India:

Provinces.	Quantity.*	Provinces.	Quantity.*
	Tons.		*Tons.*
Bengal	195,356	Central Provinces	27,427
Northwest Provinces and Oudh	89,547	Berar	27,940
Bombay	27,280	Hyderabad	9,811
Rajputana and Central India	23,937		

* Figures from "Rail-borne Trade of India," for 1888-'89.

Statistical information for the harvest of 1889-'90 for Bengal, Hyderabad, and Rajputana and Central India is not available. In the Central Provinces the area sown with linseed was 638,800 acres, or more than 26 per cent. below the average of the last 5 years. The decrease was to a great extent ascribed to the fact that for the previous 4 years the linseed crop had been very disappointing, and cultivators abandoned its growth in favor of a less precarious crop. The outturn was, however, better than in the previous year, a full crop having been gathered in some places.

In the Northwest Provinces and Oudh the area under pure linseed amounted to 640,700 acres, or 25 per cent. above that of the previous year, besides about 12,000,000 acres under mixed culture. The winter rains failed almost entirely, and the crop on high, dry land suffered much from drought and that on low land from frost. The crop on high, irrigated land was good. The condition of the crop was estimated at from 50 to 75 per cent. of the full average and the outturn at 190,000 tons, or 7⅛ bushels per acre for the pure, and 2½ bushels for the mixed, crop.

In Berar the total area covered by this crop amounted to 249,200 acres, or more than 18 per cent. below that of the previous year. The decrease was due to the season having been favorable to early crops. The outturn was below the average, having been estimated at 22,972 tons, or 3¾ bushels per acre.

In Bombay the area was 181,800 acres, or 16 per cent. below that of the previous year. The outturn was also reduced to below average for want of moisture from dew and cold. The outturn was estimated at 12,326 tons, or 3 bushels per acre.

It is too early to make any reliable forecast of the current season's crop.

As to its cultivation, it has already been stated above that it is more or less a companion crop of wheat, and, like it, it requires a rich, black soil and is grown in tracts, with an annual rainfall varying from 25 to 35 inches. It is largely grown unirrigated and unmanured, sown in November and December, and harvested in February and March. By the middle of March, in many parts, the seed is ready, and during April and May the trade in the seed is in full swing.

Bombay and Calcutta are the only ports for exporting linseed to foreign countries, the export trade in this article from Kurrachee and the Madras ports being insignificant. Bahar supplies the bulk of the Calcutta exports, but the trade also includes linseed imported from the eastern districts of the Northwest Provinces by river. Bombay draws its supplies chiefly from its presidency, the Central Provinces, Rajputana, and Central India; Berar, the Northwest Provinces and Oudh and Hyderabad.

RICE.

Rice is largely grown in Bengal. It is also the staple crop of Madras and the coast districts of Bombay. A considerable quantity is also raised in the Northwest Provinces and the Central Provinces; but Burmah is the premier rice-producing province of British India. As no forecast reports of this crop, except for Burmah, are prepared, statistics regarding the area and outturn of this year's rice crop in India are not available. As far as the Bombay presidency is concerned, the rains were uniformly seasonable and good, till the October rain, unnecessary and untimely, reduced the crop from a full to only a fair crop. It, however, compares favorably with the crop of the previous year.

Regarding its cultivation, it may be said that rice is cultivated in more ways and under more varied conditions of irrigation and climate than any other crop in India.

The description given in the Bombay Statistical Atlas is appended.

E. C. OZANNE,
Director of Agriculture.

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[Extract from Bombay Statistical Atlas, 1888.]

RICE.

In the Konkan districts and in the moist areas with very heavy rainfall all along the eastern slopes of the Sahyádris rice is grown continuously in low lands, generally embanked to impound the rain water. In these tracts irrigation is impossible, and the crop is solely dependent on the rainfall, which is entirely derived from the southwest monsoon. The rains burst suddenly and heavily and are very continuous, but terminate early. These are the tracts where rice-seed beds are prepared by burning layers of cow dung or brushwood with subordinate layers of leaves, grass, rice straw, and earth. The seed beds are on higher land than the fields into which the seedlings are transplanted—a necessary precaution to prevent flooding when the seedling is in its early stages. This, the *ráb* cultivation of rice, has been declared by the forest commission, on adequate evidence from local inquiry and careful experimental cultivation, to be good farming and, under the peculiar conditions of the country where it is practiced, the best known method of cultivating rice. Other systems known and practiced are risky and incapable of extension beyond their present small areas in *ráb* tracts.

The peculiar circumstances referred to are: (1) The absence of heavy showers before June, (2) the very heavy early rainfall, (3) the heavy continuousness of the early rain, (4) the early closure of the rains, (5) the absence of rain from the northeast monsoon, (6) the absence of facilities for water storage.

The other limited systems of growing rice in *ráb* tracts are: (1) The direct sowing of the seed in areas where the seedling is left to mature to harvest—a system only possible with the coarse variety of rice sown in lands on the seacoast either reclaimed from the sea or liable to partial immersion from the sea or tidal creeks, and thus largely impregnated with salt; (2) the raising of the seedlings in land heavily manured, either artificially or naturally. This system is of very limited application, and is only a means of preparing seedlings where *ráb* is not available or where *ráb* seedlings have been lost. It is risky and seldom remunerative, and its requirements limit its use to very insignificant areas.

The *ráb* cultivation of rice ceases in South Surat at the River Lar, chiefly because rice ceases to be the most important staple and the manure is required for sugar cane and other more remunerative crops. Its cessation is not due to superiority of skill on the part of the cultivators, for *ráb* is fully utilized in Bassein and Mahim in North Thána, where the cultivation is as skillful and admirable as in any tract in the whole presidency.

Ráb again ceases on all sides where the peculiar conditions of *ráb* tracts are wanting. Thus in the Karuátak, outside the Mallád and to some extent within its limits, water-storage facilities exist. Here rice is drilled in terraced rice fields, with the advantage either of heavy showers in May, which enable the seed to be sown and to get a good start before the burst of the regular rains, or of irrigation water stored in tanks, by which the fields are flooded and the seed sown before the rains begin. This is the mode of cultivation in the rice tracts of Darwar and Belgaum. The variety of rice is different from that grown in *ráb* tracts. It is inferior and has lost some of the characteristics of an aquatic plant. This is clear, because, if the early rain is not propitious, *jowári*, a dry-crop millet, can be grown, instead of rice. Occasionally rice is seen on one terrace and *jowári* on the next, and even rice and *jowári* are sown in the same field. In Gujerat, where rice is grown in low-lying lands embanked as in the Konkan, the seed is raised in seed beds, manured, but not *rábed*. This cultivation is possible, owing to local peculiarities of rainfall, even when irrigation is not available; but a large proportion of the rice in Gujerat is grown either under tank and well irrigation or as a pure dry crop. In the latter case it is drilled as in Darwar and Belgaum, but here (*i. e.*, in Baroach chiefly) it is a row crop in cotton fields. It is thus almost a pure dry crop. This short account shows that rice, essentially an aquatic plant, is grown even as a dry crop. The extremes are met with in the row-crop rice of Baroach and in the salt-marsh rice of the Konkan. In the latter case the seed is sown broadcast and left to grow where it falls. The seed is treated before sowing, to cause artificial germination. Where the land is very salt, it is not touched till it has been inundated by the rain. It is then stirred with the bullock hoe, and the sprouted seed is sown on the surface of the water. It falls to the bottom and takes root. It will stand complete immersion for 10 days. Sometimes it is sown from boats. Where the land is less salt, it is carefully picked with the hand hoe in the hot season and left in the rough till the rain falls, when the sprouted seed is sown broadcast.

The artificial germination of the seed, which is not confined to salt rice, or even to rice, is caused in several ways.

There are very many varieties of rice, but it is sufficient for present purposes to show only how the varieties are influenced by the conditions of cultivation and rainfall, as has been done.

One interesting method of cultivation most prevalent in Rutuagherry and Canara must be noticed. It is practiced with hot-weather rice, generally a late crop, after the reaping of the monsoon crop. The field is kept flooded for a time to kill weeds. The water is drained off, manure is applied, and the seed sown in December. It is watered from time to time and ripens in March. The water is brought from a dammed-up stream or from a well or tank. This is called Váyangana rice.

Rice straw is not a nutritious fodder. The grain is easily separated from the ear by beating on a board or on sheet rock. The glumes are persistent, and clean rice is only separated by pounding with pestle and mortar. The cultivators usually sell the rice in husk, and it is so kept by the ryots till a sale has been insured. The pounding is confined chiefly to large centers, of which Surat and Kalyán may be considered the most important. The straw is

largely used for fodder, because where rice is a staple other fodder is scarce. It is also used as a thatching material and has the great property of keeping off white ants.

LINSEED.

Linseed is grown as an oilseed, and never for flax. It is a most delicate crop, suffering from diseases of which a fungoid disease—perhaps rust—is the commonest. It is sown alone in Candeish, but in the rest of the Deccan and in the Carnatick chiefly as a row crop with wheat or grain or around the headlands. In Candeish it is sometimes taken as a late crop, following *bájri.* The seed is used in condiments and the oil in cookery.

IMPROVEMENTS IN CHINA TEA-GROWING.

REPORT BY MINISTER DENBY, OF PEKING.

I have the honor to inform you that Mr. E. Pinches, of whom I made mention in a previous dispatch, has arrived at Peking. His object is to secure the consent of the Chinese Government to his scheme of establishing a model tea farm. He has secured the approval and coöperation of the inspector-general of customs, and it is probable that he will be successful in his mission.

I inclose a clipping from the North China News, wherein Mr. Pinches gives some account of his plans and methods. I have lately received from the chamber of commerce of Los Angeles, Cal., a request to forward some tea seed for the purpose of beginning the culture of tea near that city. I instructed Consul Andrews, at Hankow, to send on some tea seed. The instructions contained in the inclosure will be beneficial to the cultivators of the plant.

CHARLES DENBY,
Minister.

UNITED STATES LEGATION,
Peking, January 15, 1891.

PROPOSED IMPROVEMENTS IN CHINA TEA-GROWING.

[Inclosure in Minister Denby's report.]

Mr. E. Pinches, who lately gave the Shanghai Chamber of Commerce some information as to his proposals with reference to the cultivation of the tea plant in China, writes us as follows from Tien-Tsin, where he has been stopping on his way to Peking:

"Briefly, my proposals are simply to endeavor to obtain from the Government at Peking a tract of land either at Shanghai, Hankow, Foo-Chow, or Formosa, to be handed over to a Chinese company for a period of not less than 15 years, in which would be established a tea garden, to be worked in the same manner as tea gardens are worked in India. The very latest tea machinery would be introduced, suitable buildings erected, and the tea bush cultivated and plucked in the same manner as in India. The introduction of machinery would considerably lessen the cost of the tea and give China a better chance of competing with India. It would also improve the make and appearance of the tea. The reason, to my mind, why China tea has so fallen off in quality is simply that less attention is now given to the cultivation of the plant than used to be given formerly. The cultivator has received a lower price for his tea year by year. To meet this, instead of working up his cultivation more, so as to get an increased yield from his plant, and thus reduce the cost of his tea and also improve its quality,

he has spent less on cultivation, thus hoping to reduce the cost of his tea, entirely forgetting that by doing so he is really killing the goose that lays the golden eggs. The Chinese—at any rate in Formosa, the only tea district of which I can speak with confidence—have simply no idea whatever of pruning as understood in India. As a rule, the tea bush is hacked down once in about 6 years, branches being left split halfway down in a most barbarous manner. Scientific pruning means really giving the tea bush a new lease of life. After a season's plucking, especially as done in China, there are a certain number of twigs which have partially dead bark, and which, if left alone, will next plucking season only give very few leaves, and those of a thin, sapless character. Cut away this partially dead wood at the end of the plucking season, and next year, when the sap commences to rise, you will have a fine young shoot which will not only give you plenty of leaf, but will also be of good quality. I have always found the soil round a Chinese tea bush caked so hard that a fork could scarcely penetrate it. If this soil were properly loosened by forking round the bush, more moisture would get to the surface roots of the bush, and thus insure a more rapid rise of sap, which again would, of course, mean increased quantities of leaf. Again, the Chinese system of plucking is very bad. Chinese wait till in a plot of tea all the bushes have got a lot of leaf on them, and then men, women, and children—sometimes the latter only 5 years of age—are let loose among the tea bushes. Nearly every leaf is ripped off the bush, whether it is properly ready or not. Some of the leaves have, of course, grown too old, and others are not properly ready. To get the best quality of leaf, you must be constantly going round your tea garden, say once in 7 days or so, only taking the leaf which is perfectly ready and leaving the rest for your next time of going round. Practice alone, of course, can teach you this. If you allow leaf to grow too long, it becomes hard and difficult to manufacture and does not make good tea. On the other hand, if you pluck it too young, you lose leaf, as, if it had been allowed to grow a little longer, it would have weighed more. It seems to me a most extraordinary thing that such an intelligent race as the Chinese undoubtedly are should calmly sit down and allow one of their most important industries to pass away from them without making an effort to prevent it. If figures are true facts, unless the Chinese make some attempt to keep abreast of the times, at the present rate of yearly decrease in the China tea crop about 4 or 5 years should see the end. There are plenty of tea gardens in India which can lay their whole crop down in London at an average cost of 7*d.* per pound, some even less. China at present can not do this. First let China try what can be done by a better system of cultivation and the introduction of the late tea machinery, and then, if that is not enough to place her on an equal footing with India, the likin must be done away with."

RICE IN MADAGASCAR.

REPORT BY CONSUL CAMPBELL, OF TAMATAVE.

I have no means of ascertaining correctly either the quantity or quality of rice produced in this country, but may safely state that the Malagasy as yet hardly raise enough for home consumption. Although beef and rice are the two principal commodities used by the natives as their general food, yet much of the rice consumed by them is imported from India by the foreign traders.

Many reasons may be assigned for the lack of the culture of rice, among the foremost of which may be cited the absolute want of roads to or from the rice-producing districts of the island to the seacoast or elsewhere. This is one of the great inconveniences which seem to render rice an unprofitable commercial exchange. Then, again, so long as the poor natives are used as draft horses in hauling on their backs everything from the seaboard to all

parts of the interior there can not be much hoped for in opening up the country. These poor creatures, who under other circumstances would most likely turn their attention to the cultivation of the soil, are compelled to act as beasts of burden. Until there is an end put to the existence of such a state of affairs, one can hope but little for the development of any of the resources of Madagascar.

JOHN P. CAMPBELL,
Consul.

UNITED STATES CONSULATE,
Tamatave, December 20, 1890.

FLORENCE.

REPORT BY CONSUL DILLER.

AGRICULTURE.

The general result of the harvest, with the exception of olives, throughout this province has been good, as well as in the province of Emilia, embraced in this consular district (see Table 1). Tuscany was especially, however, favored with an abundant harvest of corn, oats, wheat, and wine of superior quality; consequently, the prices of the prime necessaries of life were somewhat less than in the previous year, and the condition of the farming class thereby improved. No marked cases of distress in this class of workers have been reported.

Professor Ferrari, of the Royal Technical Institute, with the consent of the commanding officer in this city, has been engaged in giving instruction to the soldiers belonging to the farming class, whose terms of military service are about expiring, on the following subjects:

(1) Peronospora: character of the disease, development, its damages, and remedies.

(2) Treatment, and applying remedies of sulphate of copper.

(3) Phylloxera: its character and how to prevent its spreading; the remedies and grafting on American vines.

Some 200 soldiers have attended these lectures and manifested great interest therein. This is one of the evidences of the importance attached to this industry in Italy and how earnest the authorities are in protecting it. In former dispatches I have alluded to the importance of introducing American farming implements and machinery into this district by concerted action on the part of the producers of such goods in the United States, forming a grand depot for the sale and exhibition of such at some central point in the agricultural regions where farming is carried on on a large scale, say at Bologna or Milan for machinery and Florence for implements used by hand. The implements now in use are of a very primitive character; many of the plows certainly appear to belong to the time of Virgil. Winnowing mills and cornshellers are unknown. A windy day serves for the one, while for the other the corn is placed on a stone floor and the grain beaten off the cob with flails, as our fathers separated the wheat from the straw 40 years ago.

In Tuscany, where the holdings are generally small in area, it is doubtful, in the presence of the great number of cheap laborers, whether labor-saving agricultural machinery could be profitably introduced; certainly, the attempt would meet with great opposition from the laboring classes.

TAXATION.

The subject of taxation, always a prominent and interesting one in all communities, is especially so in Italy, where it reaches colossal proportions in its operation on the product of the land and on the income arising from buildings, being on the former about 45 per cent. and on the latter 34.71 per cent. Formerly the tax on the latter averaged about 37 per cent., but during the year 1890 these taxes have been subject to a careful revision on the part of Government officials, and all improvements and enlargements within 10 years past have been added to the present valuation, thus increasing the revenue to the Government, at the same time somewhat lessening the percentage to the owner. There was much dissatisfaction manifested at the time, and rents rose in proportion; but patriotism and a desire to aid the Government at length prevailed, and the added valuation was concurred in.

TOBACCO MONOPOLY.

The tobacco monopoly, which is a source of large revenue to the Government, is being materially increased by the establishment in this city, in connection with the works here, of a manufactory of fine cigarettes, such as heretofore were supplied by English and German houses to the amount of about $4,000,000 annually. This especial branch will be in charge of a person familiar with the manufacture of cigarettes in the East, and it is believed the product will be acceptable to the lovers of the weed in this form in Italy, and thus stop the drain of the above large amount which has hitherto found its way out of the country. Already 100 females are engaged in making Egyptian cigarettes at the factory here, with the prospect of success and a large increase of laborers in the future.

SANITARY CONDITION OF FLORENCE.

During the months of December, 1890, and January, 1891, an outbreak of typhoid fever occurred in this city, which for a time assumed alarming proportions. The reticence of the authorities and the local press made it difficult to arrive at the actual condition, the cause of the outbreak, or the number of cases. I was therefore compelled to rely on personal effort to ascertain the character and extent of the epidemic, of which the Department was promptly and frequently advised. It is to be regretted that the officials having charge of the health statistics of the city report but once in a month, which report is usually not published for a fortnight after the close of each month. A weekly report, especially at such a time, would greatly allay anxiety and prevent undue exaggeration and hostile criticism. Notwithstanding the prevalence of fever during the 2 months last past, the reports do not show any increased mortality over such period in former years.

The winter has been much colder than during the 2 previous years, the snowfall much greater, and consequently the distress among the poorer classes more severe and trying. I have no doubt that many deaths attributed to typhoid fever were really due to the latter cause, especially among the aged and feeble and young children belonging to the very poor. It is gratifying to state that, with rare exceptions, the foreign element escaped attack. The cause of the outbreak was that one of the mains supplying water to a portion of the city became impregnated with fever germs, in consequence of not having been properly protected. The closing of this contaminated supply of water at once arrested the spread of the disease, and at this time I can learn of no new cases occurring. The general health of the city is now believed to be good, and throughout the entire district the most favorable reports are received of a healthy condition of the people.

NEW SURGICAL CLINIC AND LUNATIC ASYLUM.

In this connection, I have great pleasure in referring to a new surgical clinic connected with the hospital Santo Maria Nuova, which has been built and donated by one of our citizens, Mr. E. P. Fabbri. This surgical clinic has all modern comforts and appliances and contains sixty beds, with separate apartments for males and females. The lecture hall is of iron, with accommodation for one hundred and sixty scholars. The surgical instruments, also donated, are of the finest and most approved styles. One large room with glass pavement is designed for the more serious operations, another for microscopical examinations, and still another for studies of bacteriology and kindred subjects.

Mr. Fabbri has also erected a commodious building for the lunatic hospital San Bonifazio, which has been removed to San Salvi, he agreeing to erect the new building, with greatly enlarged conveniences and the grounds necessary for its purposes, in consideration for the grounds formerly occupied by the hospital San Bonifazio, which adjoin his present residence. The transfer has been made, and the new lunatic hospital has been duly inaugurated and in successful operation, to the complete satisfaction of all parties concerned.

RAW SILK INDUSTRY.

According to the returns of the chamber of commerce in this city for the calendar year ended December 31, 1890, it appears that the actual weight of raw silk which has passed inspection at that office for the year 1890 was 110,182½ pounds avoirdupois, consisting of 495 bales, requiring 598 tests, showing a decrease of 1,683 pounds average, or 1.53 per cent., in comparison with the previous year.

FLORENCE-FAENZA RAILWAY.

In my last annual report it was predicted that this important link between Florence and the Adriatic would have been completed during the year 1890. I regret to say this prediction has not been verified. The section between this city and Borgo San Lorenzo, 35 kilometres, was opened for traffic on the 8th

of April, 1890. The running time is 1 hour 25 minutes. The line between Florence and Vaglia, which presented some serious engineering difficulties, has been finished, and the Cercina tunnel, which cost about $3,500,000, is now safely passed in 8 minutes. The sections between Borgo San Lorenzo, on the Florence end, and Marradi, on the other, are still unfinished. It appears that lack of funds, more than any serious engineering difficulties, prevents the completion of these central divisions. The next year will probably see the completion of the entire line, which, when finished, will form a close connection between Florence and the Adriatic at Ravenna and at the celebrated bathing place at Rimini, and will greatly lessen the distance between the Adriatic and the Mediterranean.

EXPORTS TO THE UNITED STATES FOR 1890.

I inclose herewith Table 2, showing the export trade between Florence and the United States for the calendar year 1890, which explains itself. I desire, however, to call the attention of the Department to the large increase of exports over the preceding year, especially in bronzes, paintings, and straw goods, the total increase for the year amounting to nearly $225,000. The number of invoices and amount of fees are not correspondingly increased, for the reason that the values of the invoices were greater and shipments of less than $100 in value did not require a consular certificate.

Although we are yet too near the passage of the new tariff bill of October 6, 1890, to form a correct opinion on its effects as regards the export trade from this district to the United States, yet enough is known to warrant the belief that its provisions are very favorable to the leading industries, especially those of straw and works of art. In the straw industry, which is the largest in the trade with the United States from this district, braids and trimmings for hats, etc., have been placed on the free list, which under the previous tariff paid a duty of 20 per cent.

On works of art—paintings in oil or water colors and statuary in marble or alabaster, stone or metal, such as is cut, carved, or otherwise wrought by hand and is the professional work or production of a statuary or sculptor only—the duty has been decreased from 30 to 15 per cent. This is also a great concession to one of the important industries of this district. On the whole, the new tariff act may be considered as favorable to Italian industries, especially so far as this consular district is concerned, and I confidently look for a greatly increased volume of trade within the coming year.

Table 3 refers to the consular agency at Bologna, which also shows a gratifying increase of exports over the previous year, especially in the articles of hemp, beans, and straw goods.

This table reports but a small percentage of direct export of Bologna sausages to the United States, yet it is known that a very large amount reaches our country via England, France, Germany, and Belgium. No duty is levied at the United States custom-houses on Bologna sausage, while smoked or salted meats produced in the United States are subject to a customs duty in Italy of 25 Italian lire, or nearly $5, on each quintal of 220.46 pounds.

On another of our principal products, petroleum (refined), the import duty is levied at 36 Italian lire, or about $7, on each quintal of 220.46 pounds. Its superiority over the Russian product enables it to maintain its supremacy.

THE WORLD'S COLUMBIAN EXPOSITION.

The exposition which is to be held, according to the proclamation of the President of the United States, at the city of Chicago on the 1st day of May, 1893, is already exciting a good deal of attention here on the part of sculptors, painters, and others. At this time it is not officially announced whether the Italian Government will respond favorably to the invitation of the President to take part in the said exposition or not, but I am confident that, individually, Italians will be represented in Chicago on that occasion by many beautiful products of their skill in the fine arts and manufactures. The favorable consideration shown to Italian products in the reduction of duties in the new tariff upon some of their principal products naturally inclines the people to an appreciation of the benefits to their trade in being properly represented at the exposition. The mere fact of the exposition being held in the interior of our country will make no great difference so far as the transport of fragile and delicate works of art is concerned. Water communication can be secured, if desired, from the ports of Leghorn, Genoa, or Naples to the very doors of the art palace on the lake front in Chicago. Continually the very finest and most delicate works of art are shipped from here to places further into the interior of our country by rail from our seaports at the sole risk and expense of the shipper without loss or damage. This, therefore, disposes of the objection which has been raised to transport to Chicago.

TABLE I.—*Crops of 1890, province of Florence.*

Products.	Yield in 1890.	Average yield, 1879–'83.	Crop of 1890 compared with those of 1879–'83.	Quality of 1890 crop.			
				Very good.	Good.	Medium.	Inferior.
District of Tuscany.			*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*
Barley.....hectolitres...	75,800	76,300	99.34	.....	67	33	.....
Chestnuts.....quintals...	592,100	862,900	68.78	.....	51	46	3
Corn.....hectolitres...	1,292,800	1,822,400	70.24	.....	87	13	.....
Hemp.....tons...	1,402	1,800	77.89	.....	30	70	.....
Oats.....hectolitres...	355,800	398,800	89.22	.....	81	19	.....
Rice.....do.....	16,900	18,600	91	.....	100	.....	.....
Wheat.....do.....	3,729,800	3,645,200	102.32	22	78	.....	.....
Wine.....do.....	2,152,900	3,068,500	70.16	49	48	3	.....
District of Emilia.							
Barley.....hectolitres...	76,500	71,900	106.40	.....	100	.....	.....
Chestnuts.....quintals...	231,800	238,400	97.23	17	19	47	17
Corn.....hectolitres...	2,501,100	3,309,300	75.62	16	49	35	.....
Hemp.....tons...	43,442	47,655	90.93	.....	62	38	.....
Oats.....hectolitres...	258,700	260,200	99.42	.....	100	.....	.....
Rice.....do.....	493,100	516,300	95.51	.....	100	.....	.....
Wheat.....do.....	5,666,600	5,362,600	105.67	9	91	.....	.....
Wine.....do.....	1,877,400	2,570,700	73.03	28	42	30	.....

TABLE 2.—*Exports from Florence to the United States in 1890.*

Articles.	Quarter ending—				Total.
	March 31.	June 30.	Sept. 30.	Dec. 31.	
Alabaster goods	$3,930.13	$4,407.14	$15,380.94	$6,443.54	$30,161.75
Books	.....	368.63	.....	.....	368.63
Bronzes	25,960.00	616.03	6,200.00	.....	32,076.03
China ware	446.35	504.62	771.23	.....	1,722.20
Household goods	8,789.20	12,948.41	6,099.21	3,813.40	31,650.22
Marble statuary	12,073.85	19,945.05	34,143.14	12,485.83	78,647.87
Mosaic goods	637.82	827.29	1,367.00	457.00	3,289.11
Olive oil, etc	1,990.56	421.94	.....	.....	2,412.50
Pictures	9,690.87	22,988.93	62,340.49	9,976.20	104,996.49
Skins	.....	.....	2,610.00	6,880.40	9,490.40
Soap	464.73	.....	735.78	618.85	1,819.36
Straw goods	297,170.20	150,231.67	185,382.36	304,251.98	937,036.21
Wine	3,056.96	4,702.89	2,572.02	5,145.94	15,477.81
Sundries	548.00	307.16	.....	553.69	1,408.78
Total	364,058.67	218,269.76	317,602.17	350,626.76	1,250,557,36

TABLE 3.—*Exports from Bologna to the United States in 1890.*

Articles.	Quarter ending—				Total.
	March 31.	June 30.	Sept. 30.	Dec. 31.	
Beans	$6,909.40	$12,083.37	$5,870.10	$17,893.60	$42,756.47
Hemp	75,701.80	85,564.11	17,228.88	21,684.80	200,879.65
Household effects	.....	1,940.61	.....	1,351.00	3,291.61
Medicines	591.83	345.71	.....	422.19	1,359.73
Rush baskets	584.59	627.15	250.51	528.91	1,991.16
Sausages	153.09	82.22	944.14	.....	1,179.45
Straw goods	6,633.94	4,348.69	7,433.69	12,569.61	30,985.93
Sundries	377.80	138.19	113.87	56.80	686.66
Total	90,951.75	105,130.05	32,541.19	54,506.97	283,129.96

TABLE 4.—*Customs duties of Florence in 1889-'90.*

No.	Articles.	Amount
1	Spirits, wine, oil, etc	$19,912.24
2	Groceries and tobacco	12,093.52
3	Chemical products, etc	4,773.17
4	Colors, etc	1,475.32
5	Hemp, flax, jute	8,008.84
6	Cotton	87,483.48
7	Wool, horse hair	119,933.82
8	Silk	32,942.70
9	Wood and straw	4,361.64
10	Paper and books	7,377.21
11	Hides and skins	12,234.31
12	Minerals, metals	64,166.75
13	Stones, clays, glasses, etc	17,181.07
14	Cereals	211.28
15	Animals, and spoils thereof	4,510.30
16	Sundries	25,364.06
	Total	422,409.72

TABLE 5.—*Municipal customs of Florence in 1889–'90.*

No.	Articles.	Amount.
1	Meats on the hoof and butchered	$259,905.55
2	Cereals, flour, paste	146,187.90
3	Provisions	193,915.67
4	Wine, beer, vinegar	498,351.68
5	Liquors	13,473.71
6	Groceries	35,302.06
7	Forage	35,595.18
8	Wood, coal, oil, etc	98,199.62
9	Materials for building, etc	14,792.59
10	Timber, metals, etc	10,688.78
11	Sundries	2,569.31
	Total	1,308,982.05

TABLE 6.—*Number of prisoners in penal institutions in Florence in 1889–'90.*

Description.	Penitentiaries.		Prisons.			Total.
	Muzate.	Santa Verdiana.*	Muzate.	Santa Verdiana.*	Santa Teresa.	
Number of prisoners on June 30, 1889	378	28	242	22	62	732
Number of persons imprisoned up to June 30, 1890	216	19	2,450	159	771	3,615
Total	594	47	2,692	131	833	4,347
Number of prisoners released:						
At expiration of term	184	10	821	91	785	1,891
Pardoned	18	.....	6	.....	.....	24
Transferred to another prison	64	.....	1,595	73	48	1,780
Transferred to lunatic asylum	6	.....	1	.....	.....	7
Dead	5	2	2	.....	.....	9
Total	277	12	2,425	164	833	3,711
Total number of prisoners on June 30, 1889	317	35	267	17	.....	636

* Female.

TABLE 7.—*Expenses of penal institutions in Florence in 1889–'90.*

Name of prisons	Total expenses.	Daily average expenses.
Penitentiaries:		*Cents.*
Muzate	$18,909.61	15.3
Santa Verdiana*	1,400.04	12.5
Prisons:		
Muzate	10,246.75	12.4
Santa Verdiana*	824.35	12.4
Santa Teresa	1,423.16	12.4
Total	32,803.91	13.8

* Female.

TABLE 8.—*Number of visitors to galleries and museums in Florence in 1889-'90.*

Galleries and museums.	Visitors.	
	Paying fees.	Artists.
Galleria Degli Uffizi	25,720	18,677
Galleria Palatina	14,912	9,259
Galleria Antica e Moderna	10,539	6,533
Museo Nazionale	12,970	2,727
Museo di San Marco	8,658	1,716
Museo Archeologico	2,241	2,249
Museo di Pietre dure	993	149
Cappelle Medicee	18,481	2,315
Cenacoli	3,722	295
Total	108,236	43,920
Total visitors paying fees and artists	152,156	
Visitors on Sundays	110,355	
Grand total	262,511	

ISAAC R. DILLER,
Consul.

UNITED STATES CONSULATE,
Florence, February 13, 1891.

SHIPPING AT MARACAIBO.

REPORT BY CONSUL PLUMACHER.

I have the honor to inclose a statement of the arrivals of vessels at this port during the past calendar year, and am pleased to note that our flag has been somewhat better represented than in 1889. At the beginning of 1890 I was quite sanguine that the exports of different woods from Maracaibo to the United States would be so increased as to cause frequent arrivals of American sailing craft, but in this I have been disappointed, as, instead of an increase, there was a considerable falling off in the shipments of timber and dyewoods. We have more than held our own, however, which is more than can be said of any other foreign country in respect to the presence of its flag in these waters.

The Venezuelan coasting trade has been unusually brisk, the number of arrivals of vessels under the flag of the Republic being during 1890 more than double that in the previous year.

The Red D line continues to do good service, and Americans may well be proud of its excellent organization and management. In my report for 1889 I dwelt upon the fact that it was obliged to compete with both German and Dutch steamers, which had the advantage of substantial subsidies from their respective Governments, being able, moreover, to run much more cheaply than American vessels, and thus offer lower rates for freight and passage. In spite of the apparent saving made by patronizing one of these

opposition lines, the incontestable superiority of the Red D steamers, their greater safety, better accommodations and fare, together with the high reputation of their commanders and officers for ability and deportment, have enabled them to always secure the best part of the trade.

Notwithstanding the drawbacks which have harassed this company, their vessels always come and go full, and the benefit to our trade with Venezuela caused by the establishment of this line is simply incalculable. All of the products of this country—amounting to many millions of dollars annually—which are exported to the United States are carried in American bottoms, which return to this country loaded with American merchandise, the greater part of which, it is safe to say, would, under other circumstances, be purchased in European markets. The German line already mentioned soon came to grief for want of patronage, and its steamers made in all only six trips to Maracaibo. The Dutch line has as yet made no attempt to invade the lake, but is content to take what cargo it can secure at Curaçao, Puerto Cabello, and La Guayra for Europe, limiting its competition with the Red D to the trip between New York, Curaçao, and the coast. It has had, however, I believe, no perceptible effect upon the business of the American line, which is now too popular and well established to be easily shaken.

I beg to point out that, setting aside Venezuelan coasters, the arrivals of American vessels at this port during the past year have exceeded those of the vessels of all other nations combined.

Table showing number of vessels arriving at the port of Maracaibo during the year ended December 31, 1890.

Flag.	Steamers.	Barks.	Brigs.	Schooners.	Total.
American	45	.....	.....	4	49
British	6	.....	1	3	10
French	.....	1	.....	.....	1
German	.....	1	7	.....	8
Dutch	.....	.....	2	6	8
Danish	.....	1	8	.....	9
Italian	.....	3	1	.....	4
Norwegian	.....	2	1	.....	3
Swedish	.....	.....	1	.....	1
Spanish	.....	.....	2	.....	2
Venezuelan	.....	.....	.....	80	80
Total	51	8	23	93	175

E. H. PLUMACHER,
Consul.

UNITED STATES CONSULATE,
Maracaibo, January 14, 1891.

SILVER MONEY IN CHINA.

REPORT BY CONSUL FOWLER, OF NINGPO.

I have the honor to inclose a translation from the Shên Pao of the prize essay of the Chinese Polytechnic Institution, in reply to the theme set by the taotai of Ningpo, Wu Yin Sün:

The southeastern provinces have now much foreign money in circulation, and the natives consider it a great convenience. Should China set about coining gold and silver money? Would it circulate freely? Would it be advantageous to the country, or the reverse?

The taotai looked over the essays himself and awarded the prize to the composition of Mr. Yang, of the Canton province, of which the inclosed is a translation.

Owing to the great interest now being excited the world over in the silver question in the United States, I venture to believe that this will be of value, especially as it shows the matter of coinage in a new quarter.

JOHN FOWLER,
Consul.

UNITED STATES CONSULATE,
Ningpo, January 23, 1891.

ADVANTAGES OF SILVER COINAGE IN CHINA.

[Inclosure in Consul Fowler's report.—Translation.]

The discussions of the present day on the causes of loss to China's wealth are confined principally to the purchase of foreign opium, foreign goods, munitions of war, and ships. Nothing is, however, said of other causes of loss, the effects of which, though slow, are persistent and deceptive. Of these the foreign dollar is the greatest.

When first foreign money was brought into China it was called the "Luzon dollar" (Spanish), coined from the products of American mines by the Spaniards, who were the first settlers in the country. Then came the American "eagle dollar," which was followed by the Japanese dollar. These dollars were first used in the Fukien and Kwang-Tung provinces; later on they reached Kiang-Soo and Che-Kiang, and at last they found their way into Hoo-Pe, Kiang-See, and Anhui, and now they are in use in every business town in the east and south. When one man began using them a hundred others followed, until everybody is praising the beauty and convenience of the dollar; and, as the importation of the dollar increased, so increased the loss to the country. The losses brought about by the influx of the dollar are not less than those caused by the importation of opium and foreign manufactures or the purchase of guns and ships. Little will show the dangerous tendency of exchanging China's wealth for the weed, of influencing the hearts of our people by the new and ingenious inventions in foreign goods, or of spending the tens of thousands required for the purchase of foreign guns or ships. These evils or losses are of the visible kind; but the loss caused by the foreign dollar, though invisible, as it were, is none the less real.

In the reigns of Tao-Kuaang and Hsien-fêng every dollar bought by China cost her 85 tael cents, and the loss on each dollar at this rate was 13 tael cents, the actual value of a dollar being 72 tael cents. The different provinces, put together, were purchasing from $40,000,000 to $50,000,000 yearly, and the heavy loss of $4,000,000 to $5,000,000 was yearly sustained.

The times are changed; but greater numbers of dollars are still brought every year from different countries, and more than one-half of the silver used in these coins contains one-tenth alloy, and for payment of this imported money pure and unalloyed Chinese silver is taken away in vast quantities. In this alone is an unknown loss. Moreover, the dollar which is worth only 72 or 73 tael cents is often sold in the money market from 1 to 4 tael cents above its value. Here also is a loss; and, if steps are not taken to check this draining, our silver supply will in the end be exhausted, if the Maling and Tientai mountains were solid heaps of silver and gold.

To stop the influx of the silver dollar or to prohibit its use by the people would be impossible. To me there appears to be but one thing which would prevent this outpour of China's wealth to foreign countries, and that is for China to set about coining silver money herself; but opponents will say that, even if China were to take this step, her money will not circulate. They will mention two instances where the attempt was made and failed. Towards the end of the reign of Tao-Kuaang two officials, one named Chow Tao-fu, of the board of punishments, and the other Chu Tung-chün, subprefect, obtained permission from the governor of Che-Kiang to start an establishment for the coining of silver dollars. When the money coined was laid before the people, they looked at it, rung it, and would have nothing more to do with it. Later on Hsü Hsüeh-tsun made a second attempt to coin dollars in Wu-hsi. The coins he turned out compared favorably in every respect with the foreign dollar, excepting that the people would not use them. Some merely say that if China put home-made silver dollars into circulation they will only be current in the southern and eastern provinces, as the people in the northern and western provinces, having been used to sycee and notes, would deem the sudden appearance of dollars as a medium of exchange a great inconvenience.

Such assertions as these are rather the opinions of narrow-minded men, who are not fit to discuss such weighty subjects, than of practical men. Which one of all those who stand on China's soil and eat of China's produce but wishes for the exaltation of China and the depression of western nations? The reason that all like the foreign dollar is because China has none of her own. Let China coin Chinese dollars, then see how many would prefer the foreign.

The coins presented to the people when the above-mentioned two attempts were made and rejected by them were false in look and ring; besides, the way in which they were brought into existence—in a village—appeared as if done privately and without sanction. This alone was enough to cause the masses to be suspicious of their legality and reject them. It is no wonder that the coins were not accepted. To avoid rousing such suspicions, the mint should be conducted in an open way; then the coin will not only be current in the eastern and southern provinces, but also in the western and northern provinces for the following reasons: Merchants of those parts at present have to carry sycee and copper cash. The cash is heavy and no great value can be carried in this form, and with sycee they suffer many heavy losses by exchange.

It is natural that man would be glad to put aside the cumbersome and take to the convenient, and the gold and silver currency, by its portability and uniform value, would rapidly gain popularity, and thus relieve the merchants of the losses and inconvenience they suffer under the present system.

The opposers of an established Government mint show four dangers which, according to them, should be well considered before China undertakes to coin dollars: (1) The facility of counterfeiting the new coin, (2) the difficulty of maintaining the coinage when commenced, (3) the loss of China's dignity by imitating western nations, (4) the possible dishonesty of the directing officials and workmen.

It would be unreasonable in the extreme for China to give up for the dread of such dangers a plan, which, if controlled by well-selected men, will effectually stop the outpour of our wealth and keep back from the foreigners a source of gain which is year after year impoverishing our country.

The impossibility of coining from the pure metal will be a gain to our Government. When the Government-coined dollars become current, the people will be pleased with the ad-

vantage of a uniform money system. The weight and value of the coins being the same throughout the country will obviate the evils of exchange, thus relieving the honest merchant of much loss and preventing speculators gambling on the rise and fall of exchange.

To stop the drain upon China's wealth by the increase of foreign manufactures involves heavy expense and promises but a slow return of benefits to the country, but it is otherwise with the establishment of a mint; the expenditure will be but small, and in a few years it will be the means of conferring a great advantage to all the provinces throughout the country. For enriching the nation there is nothing more advantageous than the establishment of an imperial mint for the coining of silver and gold money, and those who say that such a measure will bring evils greater than its possible advantages are in error.

From the above it can easily be seen that the dollars coined by China herself will surely be universally used, and that they will confer great advantages without the threatened evils.

To insure the success and permanence of the mint, it is essential to conduct it in such a manner as to leave nothing unprovided for at the outset. I attach hereto some remarks on the establishment and conducting of a mint.

The mint should be under official control. In order to gain the confidence of the people, it is necessary that all undertakings of this kind should be controlled by officials. To do this, first establish mints. They need not be in every province. If one were established at the most important part, it will supply the whole nation with coins. Take, for instance, the American mint; it is situated in Philadelphia, one of the most important cities.

The process of coining consists of melting, casting, cutting, polishing, stamping, and engraving. There in 1 minute they turn out 80 large coins or 120 small ones; in a quarter of an hour 1,200 large coins or 1,800 small coins are ready, or in 1 hour 4,800 large coins or 7,200 small ones. The rapidity with which these coins are turned out induces the writer to say that one mint will meet our needs. This mint should be at the most important town marking the limits of northern and southern China, hence Shanghai. The transportation of the coins from this town to other parts of the country will be easy; moreover Shanghai is where most of the imported coin is landed; if its market were filled with dollars of China's own coinage, it necessarily follows that the influx of foreign money will be checked.

This mint should be called the "Lung Chuan," or "Dragon Spring," mint and should consist of eight divisions—one for receiving and storing gold and silver, one for removing the impurities from the metals, one for rolling the metals into sheets, one for cutting the sheets into required lengths or sizes, one for stamping and engraving, one for weighing the coins, one for testing, and one for transportation to other parts.

The directing officers of the establishment should be men known for their honesty, intelligence, and uprightness of character. In each of the above departments or divisions should be a foreman, whose duty it will be to see that the workmen attend to their work. In this way all evils will be prevented, and, if the establishment exist for one day, it will exist for a hundred years. The above is only a general outline of my proposition, which I give in detail below.

SIZE AND DESIGN OF THE NEW COIN.

It is necessary, first of all, to decide upon a design for the new coin. It will not be wise to copy from other nations. In the writer's opinion no design can be more appropriate than the dragon. It would be far better than the human head or eagle; hence the name of Dragon Spring for the mint. The coin should bear a dragon on one side and an inscription in Chinese and Manchoo on the other. The engraving should be very fine and elaborate, showing each and every detail, in order to present a neat and beautiful appearance and at the same time prevent the coins being counterfeited. The weight of the large coin should remain the same as that of the dollar now in use, namely, 0.73 tael, and the smaller decreasing in weight in proportion. The largest of the gold coins should be worth 10 silver dollars and the next 5 silver dollars, and so on. The reason why the coins should be of the above values is that the masses, being used to these values in foreign coins, would find a new standard confusing.

NAME.

Foreign money in use in China is known by different names. China should discontinue applying them to her own coins. Each nation has names for her own money—for instance, in France, franc; Russia, ruble; India, rupee, etc. China, also, should have a suitable name for her coins. Since the design is to be the dragon, nothing could be more appropriate than "lung chien," or "dragon money."

SEPARATION OF THE PRECIOUS METALS FROM THE BASER METALS.

Silver and gold used for coining should be of the purest. Gold sometimes contains silver and copper, and, again, silver contains copper and gold. If coined while containing baser metals even in the smallest quantity, it would give the coins a rough appearance. In western nations impurities in metals can be removed with the help of acids. The ore as it comes from the mine is put into a crucible of a certain yellow earth, with certain acids, and placed over a fire. The gold and silver become separated from the copper, which adheres to the sides of the crucible; the two first-mentioned metals are then put through a similar process, when they become separated. The gold is then removed, while the silver mixes with the acid. This solution of silver is now placed into a glass vessel, and to it are added other acids, and the silver forms and sinks; another addition of acids ends the process.

Another method is also in use; although resembling the above, it differs from it in minor details. These methods apply to both silver and gold, and, as the acids are within China's reach, there is no reason why there should be any difficulty.

THE PURCHASE OF MACHINERY FOR COINING.

To coin by means of molds would be unsatisfactory and expensive work, and, to do good and quick work with small expense, the only thing left would be to purchase the necessary machinery. Machinery used for this purpose in western nations differs very much. Some are capable of turning out from 40,000 to 60,000 coins per day. Americans have brought coining to perfection, and we may copy from them. The use of machinery in coining saves a deal of labor, and hence ought to be employed. China is larger than most foreign countries, and, if machinery is not used in coining her money, the Government will not be able to meet the demand. To have mints scattered throughout the country would not be as practical as having only one mint with a good supply of plant.

EXAMINATION INTO METHODS ALREADY IN USE IN OTHER NATIONS.

If China coins her own money, it is necessary that she should examine into the methods already in operation by her neighbors. Before Japan started to coin her own money, a commission was sent to foreign countries to examine and learn what was being done. The plant in use was purchased at Hongkong. In the eleventh year of the reign of Tungchik (1872) the statistics showed that Japan had then already coined 2,190,256 gold pieces of different sizes, valued from $2.50 to $10 each, or in value altogether $14,488,981 silver; of silver coins, 13,313,722, valued from 5 cents to $1, or in value altogether $5,689,685. Now, China, before taking any further steps, should send a commission with artisans to the east and west to learn the latest improvements in money-coining. There can not be the slightest doubt as to success.

EMPLOYMENT OF CHINESE AT THE MINT.

In order to succeed, it seems necessary at first to employ foreigners as overseers, but to me the employment of Chinese seems more advisable. There are at present a number of Chinese in foreign countries, such as Manila, Cuba, and other places. These men are principally artisans, who not only have acquired a knowledge of the ways and manners of the foreigners, but have also learned something about machinery and its workings. These can be recalled and given employment, and would be found easier to deal with than foreigners, who will not move out of a beaten path; moreover, there is a great saving in their salary. Chinese minis-

ters and consuls in foreign countries should be directed to issue notices calling upon such artisans to return to China. Finding there is employment at home, they would be only too glad to return.

PREVENTION OF COUNTERFEITING THE NEW COINS.

With machinery there need be no fear of false money being put into the market; the only danger there appears to be is that the coins might be hollowed and refilled with baser metal. Coins made by machinery are different in appearance to hand-made ones, and those who coin false money are as a rule unable to purchase machinery for that purpose. The same punishment as that awarded to coiners of false cash should be administered to those putting false or mutilated coins into the market.

Experts should be employed to see that the money at banks is genuine, and rewards for information on the coining of false money should be made public.

REWARD AND PUNISHMENT OF THOSE CONNECTED WITH THE MINT.

Few outside the mint would attempt to coin false money; the danger lies mainly with those who have control. Those who have performed their duties well will be rewarded according to their merits, and those who attempt fraud will be punished by one degree beyond the punishment provided by law for similar offense committed by people having no connection with the Government mint. In this way each, for his protection, will do his best.

A STANDARD VALUE FOR THE NEW COINS.

There is at present no fixed value for the dollar; the nominal value is 0.73 tael, but at times it is sold for 0.71 or 0.72, and at others 0.74 or 0.75, according to the rates laid down in the money market. Besides this inconvenience, there is the evil of speculators gambling on the rise and fall of exchange. To prevent this, it is necessary that a standard value of the gold and silver coin be fixed throughout the country. The local authorities should make it their duty to see that there are no premiums or discounts offered, and the bank making the offer should be closed and sealed and the banker deported.

PAYMENT OF TAXES AND MILITARY EXPENSES IN THE NEW COIN.

To attain success it is necessary to gain the confidence of all classes; hence the Government should begin by collecting taxes and defraying military expenses in the new coin. This would be an advantage to every province.

As the new money will have a standard value, there will no longer be any dishonesty on the part of the treasury. The Government and people using the same coin will in a short time make it universally current.

After the establishment of the mint the Government can set up banks in the different provinces, and these state banks will issue bills having the same value and answering the same purposes as the metallic currency.

STREET-LIGHTING IN BERLIN.

REPORT BY CONSUL-GENERAL EDWARDS.

The use of the electric current for public lighting purposes in the city of Berlin dates from the beginning of the period under report.

Since the fall of 1882 the Potsdamer Platz and Leipziger street, as far as Friedrich street, have been lighted with thirty-six electric arc lights.

At first the business was in the hands of the firm Siemens & Halske, but in the spring of 1886 it was transferred to the Berlin Electricity Company.

With the exception of a few interruptions, which were excusable at the beginning of the business, nothing has occurred to raise any objection to the further use of electricity for street-lighting purposes.

It is true that there is a difference in the cost of electric and gas lights, even where improved burners, which consume a much larger quantity of gas than did the old ones, are used. Yet, when the question arose as to whether the Unter den Linden, which had previously been miserably lighted, should be lighted with electricity or with improved gas jets, the city authorities decided in favor of the former. It was decided on April 29, 1887, that—

The grand entrance of Unter den Linden in our present imperial city, the popular promenade in the same, the monumental character of the buildings on this street and on its extension as far as the royal castle require the use of the most beautiful, if at the time the most expensive, system of lighting and to a greater extent than in the Leipziger street, which, however brilliant it may have become in recent times, lacks the æsthetic and historic importance of the street in which our emperor and crown prince reside, of the street which is the center of festal joy on all holidays of the Fatherland, of the street which time and again has been the *via triumphalis* of our returning victorious warriors.

On September 29, 1887, the project of lighting Unter den Linden and its extension as far as the Spandauer street was finally adopted, and the contract was given the Berlin Electricity Company.

On August 31, 1888, for the first time, one hundred and four arc lights cast their dazzling brightness over the Pariser Platz, Unter den Linden, the Opera Platz, the Castle bridge, the Platz am Lustgarten, and the Kaiser Wilhelm bridge and street.

The lamp poles were constructed after a model approved by the architectural society, and cost 82,000 marks.

The amount to be paid by the city for light was fixed by contract at 36 pfennigs per hour, or 96,262.80 marks per annum. For the Potsdamer Platz and Leipziger street 40 pfennigs* per hour is paid to the Berlin Electricity Company. This amounts to about 29,000 marks per annum. The company, at its own expense, keeps in repair lamps, lanterns, and poles and attends to the lamps. While these two streets are lighted with electric light, there has been an improvement in the lighting of many other streets also.

The ever increasing traffic on the principal streets and the extension of the network of street-car lines have rendered necessary for streets in the periphery of the city not only an increase in the number of lights, but also a great increase in their intensity as compared with that of ordinary street lamps.

In addition to the electric lanterns, with Siemens's regenerative burners, on Leipziger street and at many crossings and on many squares, in recent years an improved system of lighting with Bray burners has been introduced in those streets where the street-car traffic has been heavy. With the latter

*The difference in the unit of cost is only apparent, as the 10-per cent. tax which the company has to pay the city on its gross receipts has, in the price for Unter den Linden, already been deducted, while it is included in the 40 pfennigs paid on Leipziger street. In reality the lighting on Unter den Linden is cheaper in that, in accordance with contract, each arc lamp has a 2,000-candle brilliancy, while those on Leipziger street have only 800-candle brilliancy.

burners a flame twice as large as that of the ordinary street lamp is obtained in lanterns specially constructed for the purpose. It is the intention of the municipal gas commission to erect such lanterns as rapidly as possible in the most frequented streets.

The number of public lanterns has increased from 13,377 on April 1, 1882, to 18,152 on the 1st of April, 1889, this being an increase of 4,775 lanterns. Of these, 17,509 flames were fed by the municipal gas works and 643 by the Imperial Continental Gas Association at the cost of the city. The latter are situated in that part of the community of Schöneberg which was taken within the city limits in 1860. The increase of lanterns in the separate years may be seen from Table 1 annexed to this report. From the same table it appears that the number of petroleum lanterns, which at the end of March, 1882, was 848, at the end of March, 1889, had grown to 1,095, an increase of 247. These lanterns are in outskirt streets, or in parts of the city where there are no buildings, or where, as in the Thiergarten and Kastanienwäldchen, they are used only for lighting promenades.

To what extent the cost of public lighting has increased during the years from 1882 to 1889 is shown in Table 1.

The use of gas for private purposes has also materially increased in the period under report. The amount of gas produced and used rose from 68,452,000 cubic mètres in 1882 to 90,210,000 cubic metres in the year ended April 1, 1889, that is, an annual average increase of 4.6 per cent., which is the more remarkable as from year to year the competition of electric light with gaslight has increased. The increase in the use of gas was principally for industrial purposes, for heating, and for technical purposes. In the year 1888–'89 3,794,257 cubic metres of gas were used for these purposes, the cost to consumers being 12.8 pfennigs per cubic metre; while 68,387,757 cubic metres were used by private persons for illuminating purposes, the cost to the consumer being 16 pfennigs.

In view of the constantly increasing use of gas and of the fact that the existing gas works were rapidly nearing the limit of their yielding capacity, the erection of new—the fifth—gas works seemed to be a necessity. The rapid growth of the western and southwestern parts of the city indicated this to be the proper site for the erection of the new gas works. In the spring of 1889 a site was selected between the Ringbahn depots of Schmargendorf and Halensee for the building of new gas works with a daily capacity of from 300,000 to 350,000 cubic metres. Connected with these are to be branch works, for which a site has been selected within the limits of Charlottenburg, near the Berlin frontier.

In the meanwhile, with the increased use of gas from year to year, the other four gas works have been enlarged and improved. The pipe network has been lengthened and extended to the new quarters of the city. Simultaneously with the repairing of the streets the gas pipes have, as far as possible, been laid under the sidewalks. At the same time many weak points were repaired, and hence the waste has been considerably diminished.

What have been the expenses of the city during the period under report for the improvement of gas works and the extension of pipe systems is shown in Table 2.

On April 1, 1889, the pipe lines of the municipal gas works had a length of 696,493 metres and a cubic capacity of 37,466 cubic metres; at the end of March, 1882, their length was 587,433 metres and their capacity 27,187 cubic metres.

The coal used was obtained (with the exception of a few sample purchases of English coal) from the fiscal mine at Zaborze, in upper Silesia, and from the Glückhilf mine, near Hermsdorf, in lower Silesia. The prices varied very little, ranging from 17.75 to 18 marks per ton of 1,000 kilogrammes. The coal was brought direct to the works, chiefly by railway. In the last year of the period under report 314,264 tons of coal were used.

On the whole the secondary products obtained in the manufacture of gas (coke, tar, ammoniac liquor, cleansing mass, etc.) were sold at good prices. On the average about two-thirds of the cost of the coal was obtained by the sale of these secondary products.

There was no difficulty in obtaining the necessary supply of laborers for the gas works, and wages were raised about 15 per cent.

The financial condition of the municipal gas commission is entirely satisfactory and shows a considerable surplus. Table 2 shows the amounts paid each year into the city treasury from the gas department.

While on April 1, 1882, there was paid into the city treasury by the gas department a surplus of gain of 3,986,302.31 marks, and interest on loans amounting to 465,450 marks, making a total of 4,451,752.31 marks, on April 1, 1889, in like manner, was paid into the city treasury: Interest on loans, 465,450 marks; surplus of gain, 5,049,826.46 marks; gas supplied for street lighting (11,489,208 cubic metres at 13⅓ pfennigs), 1,531,894 marks; total gain and saving to city treasury, 7,047,170.46 marks. The value of the municipal gas works at the end of March, 1889, was 47,335,878.08 marks, from which is to be deducted outside investments and loans of 14,221,959.50 marks, namely: From the loan of 1869, 2,897,613 marks; from the loan of 1875, 10,360,790 marks; securities, 585,635.85 marks; leaving balance of surplus gain due the city treasury on April 1, 1889, of 377,920.65 marks. After deducting these debts, it will be seen that communal property in the form of gas works had, at the end of March, 1889, a value of 33,113,918.58 marks; at the end of March, 1882, their value was 26,225,491.32 marks; hence the value of the municipal gas works of Berlin has, in the period under report, increased 6,888,427.26 marks.

TABLE I.—*Berlin street-lighting statistics.*

Year.	Lamps fed from the municipal gas works.		Lamps fed from the works of the English Gas Company.		Total gas jets.	
	Number.	Increase.	Number.	Increase.	Number.	Increase.
From April 1, 1882, to March 31, 1883.....	13,660	724	454	13	14,104	737
From April 1, 1883, to March 31, 1884.....	14,107	447	473	19	14,580	466
From April 1, 1884, to March 31, 1885.....	14,530	423	507	34	15,037	457
From April 1, 1885, to March 31, 1886.....	14,947	417	519	12	15,466	429
From April 1, 1886, to March 31, 1887.....	15,512	565	553	34	16,065	599
From April 1, 1887, to March 31, 1888.....	16,519	1,007	583	30	17,102	1,037
From April 1, 1888, to March 31, 1889.....	17,509	990	643	60	18,152	1,050

Year.	Petroleum lamps.		Cost of lighting lamps fed by the municipal gas works.	Cost of lighting lamps fed from the works of the English Gas Company.
	Number.	Increase.		
			Marks.	*Marks.*
From April 1, 1882, to March 31, 1883.....	883	35	1,234,786.40	40,995.95
From April 1, 1883, to March 31, 1884.....	949	66	1,284,574.06	42,328.78
From April 1, 1884, to March 31, 1885.....	977	28	*1,317,663.20	44,320.18
From April 1, 1885, to March 31, 1886.....	981	4	1,365,751.74	47,749.30
From April 1, 1886, to March 31, 1887.....	1,040	59	1,412,915.33	49,196.64
From April 1, 1887, to March 31, 1888.....	1,064	24	1,501,519.33	52,680.02
From April 1, 1888, to March 31, 1889.....	1,095	31	1,531,894.00	54,485.93

Year.	Cost of erecting new gas lamps.	Cost of lighting petroleum lamps, including new petroleum lamps.	Cost of electric lights.	Total cost of public lighting.
	Marks.	*Marks.*	*Marks.*	*Marks.*
From April 1, 1882, to March 31, 1883.....	22,734.61	46,020.05	†40,000.00	1,384,537.01
From April 1, 1883, to March 31, 1884.....	28,623.08	53,763.79	†46,727.38	1,456,017.09
From April 1, 1884, to March 31, 1885.....	50,419.66	52,263.88	†25,427.63	1,490,094.55
From April 1, 1885, to March 31, 1886.....	35,770.78	53,511.25	‡15,425.80	1,518,208,77
From April 1, 1886, to March 31, 1887.....	54,530.12	54,505.13	†29,149.90	1,600,297.12
From April 1, 1887, to March 31, 1888.....	67,253.12	56,885.18	†29,372.09	1,707,709.74
From April 1, 1888, to March 31, 1889.....	68,056.75	55,881,08	§86,843.43	1,797,161.19

*Since April 1, 1884, the cost of gas used for public lighting has not been paid from the city treasury to the gas commission.

†For the thirty-six arc lamps in Potsdamer Platz and Leipziger street, from September 20, 1882.

‡From December 1, 1885, to March 22, 1886, there was no electric light.

§For lighting Potsdamer Platz and Leipziger street, 28,940.13 marks; for lighting Unter den Linden, etc., 57,903.30 marks; total, 86,843.43 marks.

TABLE 2.—*Report on street-lighting in Berlin.*

Year.	Population.		Outlay.		
	Number.	Increase.	Extension and improvement of gas works sites.	Extension of works, buildings, apparatus, and pipes.	Total.
		Per cent.	*Marks.*	*Marks.*	*Marks.*
From April 1, 1882, to March 31, 1883..	1,196,205	4.2	— 748.86	422,396.01	421,647.15
From April 1, 1883, to March 31, 1884..	1,238,716	3	1,467.67	456,783.13	458,250.80
From April 1, 1884, to March 31, 1885..	1,271,677	3.1	200,848.83	249,176.04	450,024.87
From April 1, 1885, to March 31, 1886..	1,315,287	3.4	50,819.36	1,224,401.82	1,275,221.18
From April 1, 1886, to March 31, 1887..	1,362,458	3.4	449,570.65	1,370,787.46	1,820,358.11
From April 1, 1887, to March 31, 1888..	1,416,373	3.9	3,961.38	2,015,174.68	2,019,136.06
From April 1, 1888, to March 31, 1889..	1,470,288	3.8	—7,753.02	1,135,140.00	1,127,386.98

Year.	Gas production.			Highest consumption of gas on 1 day.		
	Quantity.	Increase.		Quantity.	Increase.	
		Quantity.	Per cent.		Quantity.	Per cent.
	Cu. met.	*Cu. met.*		*Cu. met.*	*Cu. met.*	
From April 1, 1882, to March 31, 1883.	68,452,000	2,463,000	3.73	358,500	8,500	2.4
From April 1, 1883, to March 31, 1884.	70,556,000	2,104,000	3.07	375,500	17,000	4.75
From April 1, 1884, to March 31, 1885.	74,337,000	3,781,000	5.36	393,400	17,900	4.77
From April 1, 1885, to March 31, 1886.	77,834,000	3,497,000	4.7	408,400	15,000	3.81
From April 1, 1886, to March 31, 1887.	81,227,000	3,393,000	4.36	426,400	18,000	4.41
From April 1, 1887, to March 31, 1888.	86,415,000	5,188,000	6.39	453,100	26,700	6.26
From April 1, 1888, to March 31, 1889.	90,210,000	3,795,000	4.4	470,400	17,300	3.82

Year.	Gas jets fed from municipal gas.					
	Public.			Private.		
	Number.	Increase.		Number.	Increase.	
		Number.	Per cent.		Number.	Per cent.
From April 1, 1882, to March 31, 1883.....	13,660	724	5.6	649,175	8,100	1.02
From April 1, 1883, to March 31, 1884.....	14,107	447	3.2	661,372	12,197	1.9
From April 1, 1884, to March 31, 1885.....	14,530	423	3	682,697	21,325	3.2
From April 1, 1885, to March 31, 1886.....	14,947	417	2.9	707,113	24,416	3.6
From April 1, 1886, to March 31, 1887.....	15,512	565	3.6	734,223	27,110	3.8
From April 1, 1887, to March 31, 1888.....	16,519	1,007	6.49	766,121	31,898	4.3
From April 1, 1888, to March 31, 1889.....	17,509	990	5.8	799,059	32,938	4.3

TABLE 2.—*Report on street-lighting in Berlin*—Continued.

Year.	Total capital invested.	Amount of capital per 1,000 cubic metres of gas produced.	Renovation fund.	Amount of renovation fund used for improvement of building and apparatus.
	Marks.	*Marks.*	*Marks.*	*Marks.*
From April 1, 1882, to March 31, 1883	37,464,992.27	547.32	1,104,424.83	1,350,933.75
From April 1, 1883, to March 31, 1884	37,983,243.07	537.49	1,102,545.72	801,112.60
From April 1, 1884, to March 31, 1885	38,373,267.94	516.21	100,000.00	357,137.35
From April 1, 1885, to March 31, 1886	39,648,489.12	509.40	842,956.00	415,821.03
From April 1, 1886, to March 31, 1887	41,468,847.23	510.53	853,398.18	332,921.08
From April 1, 1887, to March 31, 1888	45,487,983.29	503.24	877,137.59	377,433.29
From April 1, 1888, to March 31, 1889	44,615,370.27	494.57	949,267.69	249,429.33

Year.	Amount used or available for improvement of the systems.		
	From renovation fund after deducting outlay for improvements.	From new loans.	Total.
	Marks.	*Marks.*	*Marks.*
From April 1, 1882, to March 31, 1883	.....	421,647.15	421,647.15
From April 1, 1883, to March 31, 1884	301,433.12	155,350.01	456,783.13
From April 1, 1884, to March 31, 1885	.....	450,024.87	450,024.87
From April 1, 1885, to March 31, 1886	427,134.97	760,000.00	1,187,134.97
From April 1, 1886, to March 31, 1887	520,477.10	1,715,000.00	2,235,477.10
From April 1, 1887, to March 31, 1888	499,704.30	1,793,041.99	2,292,746.29
From April 1, 1888, to March 31, 1889	699,838.36	391,853.20	1,127,386.98

Year.	Total book value of gas works at close of business year.	Outside capital.	Municipal investment in gas works.
	Marks.	*Marks.*	*Marks.*
From April 1, 1881, to March 31, 1883	40,260,386.07	13,264,963.23	26,995,422.84
From April 1, 1883, to March 31, 1884	40,727,254.43	12,808,843.88	27,918,410.55
From April 1, 1884, to March 31, 1885	41,250,028.32	12,935,105.38	28,314,923.00
From April 1, 1885, to March 31, 1886	42,565,807.66	13,138,436.77	29,427,370.89
From April 1, 1886, to March 31, 1887	47,724,524.27	17,343,878.88	30,380,649.39
From April 1, 1887, to March 31, 1888	46,157,525.60	14,527,941.80	31,629,583.80
From April 1, 1888, to March 31, 1889	47,335,878.08	14,221,959.50	33,113,918.58

TABLE 2.—*Report on street-lighting in Berlin*—Continued.

Year.	Amount received by city treasury from the gas works.		
	Interest on capital arising from former surpluses.	Gain surplus.	Total.
	Marks.	*Marks.*	*Marks.*
From April 1, 1882, to March 31, 1883	465,450	4,353,058.80	4,818,508.80
From April 1, 1883, to March 31, 1884	465,450	4,727,916.09	5,193,366.09
From April 1, 1884, to March 31, 1885	465,450	4,639,623.26	5,105,073.26
From April 1, 1885, to March 31, 1886	465,450	4,442,122.96	4,907,572.96
From April 1, 1886, to March 31, 1887	465,450	4,588,761.46	5,054,211.46
From April 1, 1887, to March 31, 1888	465,450	4,613,158.42	5,078,608.42
From April 1, 1888, to March 31, 1889	465,450	5,049,826.46	5,515,276.46

W. H. EDWARDS,
Consul-General.

UNITED STATES CONSULATE-GENERAL,
Berlin, March 9, 1891.

COMMERCE OF PORTO RICO IN 1889.

REPORT BY CONSUL STEWART, OF SAN JUAN.

EXPORTS.

As compared with the year 1888, there is an increase of $1,095,560 in the value of the exports, due to the larger production of tobacco and sugar, the increased export of cattle, and the higher prices of coffee. The estimated value of the year's exportation is $11,066,683.

Sugar.—The production and exportation of this article exceeded that of the preceding year by 1,623 tons. Of the 63,610 tons exported, the United States received 38,724 tons; Spain, 14,039 tons; England, 9,002 tons; and Denmark and Cuba, the remainder.

Coffee.—There was a falling off in the production of this article of 6,234 tons, but the increase in the price more than made up the difference. The total amount exported was 15,891 tons, distributed as follows: Cuba, 6,231 tons; France, 3,339 tons; Germany, 2,474 tons; Spain, 2,118 tons; Italy, 1,157 tons; and the United States, Austria, England, Denmark, Holland, and San Domingo, the remainder.

Molasses.—There was a decrease of 399 tons in the exportation of this article on account of a larger consumption in the manufacture of rum. There were 20,703 tons exported, of which the United States received 17,949 tons; England, 2,532 tons; and Spain, the remainder.

Tobacco.—The crop exceeded that of last year by 1,991 tons. The total amount exported was 3,509 tons, 2,597 tons going to Spain, 483 to Germany, 395 to Cuba, 13 to Denmark, 7 to France, 6 to Portugal, 4 to England, 1

to the United States, and the remainder to San Domingo, Venezuela, Holland, and Belgium.

Cattle.—The exportation was greater this year than last by 444 head. The number exported was 6,531, the French West Indies taking 65 per cent.; British West Indies, 18 per cent.; St. Thomas, 13 per cent.; and Cuba and San Domingo, the remainder.

Other articles.—These include hides, tallow, salt, lumber, guano, cocoanuts, oranges, etc., of which 405 tons of hides were sent to Spain and Germany; 149 tons of tallow to Spain, Cuba, and Germany; 506 tons of salt to Cuba, and $19,880 worth of cocoanuts and oranges to the United States. The estimated value of all other articles of export was $198,665.

IMPORTS.

The value of the imports in 1889 was $335,445 less than those of 1888. The total importation of $14,177,557 was divided as follows: Spain, $3,920,147; United States, $3,778,015; England, $3,109,433; Germany, $1,477,321; Cuba, $945,033; France, $444,999; Denmark, $193,055; Uruguay, Argentine Republic, Belgium, Holland, Italy, Colombia, Venezuela, etc., the remainder.

Cotton manufactures.—In these goods there was a falling off in the importation of 175 tons. The value of the entire importation was $1,770,423, Spain sending $1,073,365; England, $599,190; France, $35,076; Germany, $33,063; United States, $23,008; and Belgium, the remainder.

Woolens.—The importation of these goods in 1889 was greater than in the preceding year by $6,955. Of the total importation of $505,333, Spain sent $378,353; England, $90,151; France, $17,127; Germany, $14,006; and Belgium and the United States, the remainder.

Jute, hemp, and flax goods.—In these there was a decrease of $111,025. The total importation was $584,793, of which England contributed $301,865; Spain, $143,820; United States, $50,622; and France and Germany, the remainder.

Rice.—Rice was imported to the value of $1,718,110, principally from Germany, England, and Spain. The importation was 1,125 tons less than in 1888.

Flour.—Flour was imported to the value of $1,788,948, the United States sending $1,610,033 and Spain $178,915. This is a falling off of 879 tons.

Codfish.—The importation of codfish was valued at $441,260, Canada sending $315,948; the United States, $111,472; and Denmark, the remainder. This is an increase over last year of 2,105 tons.

Pork and hams.—Pork and hams were imported to the value of $219,032, the United States sending $214,392 and Spain, England, and Germany the remainder, a falling off from last year of 911 tons.

Lard.—Lard was imported to the value of $451,581, all from the United States, an increase of 670 tons over last year's importation.

Canned goods.—These goods were imported to the value of $152,350, Spain sending $98,344; United States, $25,929; France, $15,755; and England, Germany, and Italy, the remainder.

Cheese.—Cheese was imported to the value of $206,715, the United States sending $64,350; England, $46,683; Germany, $66,948; France, $16,853; and Spain, Holland, and Denmark, the remainder.

Other provisions.—Under this head come all articles of provisions not enumerated above, the principal of which are jerked and salted beef, butter, olive oil, vegetables, and preserved fruits and sweetmeats. The importation of such provisions amounted to $744,694, of which the United States sent $256,534; Spain, $249,249; Germany, $159,430; France, $39,059; England, $26,355; and Italy, Cuba, Denmark, Uruguay, and Argentine Republic, the remainder.

Beer, wine, and spirits.—The importation of liquors amounted to 843,242 gallons, valued at $602,233, a decrease from the preceding year of 86,346 gallons. Of wine there were 566,346 gallons, Spain furnishing 538,648 gallons; France, 22,858 gallons; and Italy, Germany, England, and Denmark, the remainder. Beer takes second place with 144,650 gallons, 74,566 coming from Germany, 28,644 from Denmark, 23,254 from England, and the remainder from the United States, Spain, and France. Brandy takes third place with 63,426 gallons, Cuba sending 29,634; France, 13,772; Spain, 7,128; Germany, 5,566; England, 5,478; and the United States and Denmark, the remainder.

Metals.—This trade shows an improvement of 559 tons over the preceding year. The value of the total importation was $540,684, of which England contributed 71 per cent.; United States, 13 per cent.; Germany, 10 per cent.; and Spain, France, and Denmark, the remainder.

Coal.—The importation of coal was 5,260 tons less than in 1888. England's contribution decreased by 5,525 tons, and that of the United States increased by 976 tons. The total importation was 11,189 tons.

Other articles.—This heading includes a great variety of articles, the principal of which are petroleum, glassware and stone and porcelain ware, oils, drugs and chemicals, soap, paraffine and stearine, paper, straw paper and boards, lumber, hoops and staves, and shoes. Petroleum, which comes entirely from the United States, was imported to the amount of 1,856 tons, valued at $148,485. Glassware and stone and porcelain ware come principally from Germany, which furnished 370 tons, chiefly of the coarser grades, 125 tons coming from Spain, 124 from England, 119 from the United States, and 67 from France, the value of the total importation being $182,955. Of the total importation of 231 tons of oils, valued at $57,890, Spain furnished 36 tons; England, 66 tons; and France, Germany, Italy, and Cuba, the remainder. Drugs and chemicals were imported to the amount of 45 tons, valued at $46,265, of which 17 tons were from the United States, 11 from France, and 5 each from England, Spain, and Germany. Out of a total importation of soap of 2,134 tons, valued at $277,430, Spain sent 2,016 tons. Paraffine and stearine were imported to the amount of 269 tons, valued at $80,815, of which England sent 90 tons; Spain, 89 tons; Germany, 68 tons; and France, 20 tons. Of paper 239 tons were imported, valued at $56,360, 82 tons coming from Spain, 53 tons from the United States, 51

tons from Germany, 22 tons each from England and France, and the remainder from Belgium. Straw paper and boards were imported to the amount of 873 tons, valued at $94,925, the United States furnishing 694 tons; Spain, 156 tons; and England, France, and Germany, the remainder. Lumber, which comes only from the United States and Canada, was imported to the value of $139,155, the former country sending 5,308,120 feet and the latter 2,724,200 feet. Hoops and staves to the amount of 9,630 tons were imported, valued at $148,055, of which the United States sent 93 per cent. Out of a total of 94 tons of shoes, Spain sent 89 tons. Machinery was imported to the amount of 648 tons, of which England sent 453 tons; Spain, 110 tons; and France, 32 tons. Belgium has sent 2,207 tons of railway material and France 8 tons. Out of a total of 78 tons of plows, England furnished 44 tons and the United States 14 tons.

SHIPPING.

Table showing number and tonnage of vessels entered and cleared.

Flag.	Entered.		Cleared.	
	No.	Tons.	No.	Tons.
British	357	168,023	435	170,053
Spanish	574	688,996	465	608,794
United States	113	77,510	153	89,843
French	102	104,361	118	89,955
German	109	179,001	69	105,018
Others	28	5,940	24	5,880
Total	1,283	1,223,831	1,264	1,062,543
Total in 1888	1,406	1,235,749	1,344	963,602

L. R. STEWART,
Consul.

UNITED STATES CONSULATE,
San Juan, February 16, 1891.

AMERICAN TRADE IN SENEGAL.

REPORT BY CONSUL STRICKLAND, OF GORÉE-DAKAR.

I took occasion recently to point out that the new duties levied here might prove quite unfavorable to the interests of American commerce.

At the date of the dispatch, however, I had conferred with no American party on the subject, and the remarks made were simply a reflection of my own judgment in the matter; but a few days later I received a letter from the agent of the American firm from Portland, Me., lately established in St. Louis, on the last page of which he casually mentioned how the new duties were already affecting his trade. The last paragraph contains the summing up of his views on the subject of the duties. The senior member of the firm in question is now on his way here to look into the condition of things as lately developed by the duties, and, in the present temper of his agent, it would seem that the business established in the beginning with

considerable expense may not be of long continuance. Other American parties have communicated to me their discouragement, but some of them will doubtless keep on until a change for the better appears entirely out of the question.

It would not be so bad if this unlooked-for check to business affected only the few shipowners who run vessels here. The furnishers of goods "expressly for this market" are now numerous throughout the West and, in fact, are represented in most sections of the United States.

PETER STRICKLAND,

UNITED STATES CONSULATE, *Consul.*

Gorée-Dakar, March 6, 1891.

SWISS EXPORTS TO THE UNITED STATES.

REPORT BY CONSUL ADAMS, OF HORGEN.

The Federal Government at Berne has just issued a table compiled from the returns of the United States consulates, showing the exportation from Switzerland to the United States from 1864 to 1890 and from each consular district for 1889 and 1890, a copy of which is subjoined.

During this period of 27 years the chief articles of export have always been the same, namely: Silk and silk goods, cotton and woolen goods, embroideries, straw and horse-hair goods, watches and watch material, musical boxes, cheese, and hides, to which, during the last 10 years or more, are to be added aniline colors. The four great articles are silks, cottons and woolens, embroideries, and watches. The exportation of embroideries, a special product of the canton of St. Gall, amounted in 1864 to 352,277 francs and rose almost without interruption to 37,554,153 francs in 1890. Silk and silk goods, manufactured in the northern and German cantons, from Basle to St. Gall, fell to 18,818,073 francs in 1867, reached a maximum of 45,122,069 francs in 1882, and declined to 25,828,437 francs in 1890, or a little more than the exportation in 1864. Watches and watch material rose to 18,312,511 francs in 1872, fell to 3,569,048 francs in 1877, and rose again to 9,948,811 francs in 1890, as against 8,477,192 francs in 1864. Musical boxes began in 1864 with a value of 72,482 francs and rose on the whole steadily to 1,558,077 francs in 1890. Cheese rose from 241,573 francs in 1864 to 4,642,251 francs in 1890. The articles whose exportation increased most steadily—embroideries, musical boxes, and cheese (Emmenthal, Gruyère, and Sago)—are special products of Switzerland without competition in the United States. The greatest variations are in articles exposed to competition with American products—silk, watches, cottons and woolens.

The heaviest exportation is now from the consular districts of St. Gall (40,339,072 francs, nearly half of the total for 1890) and Basel (23,371,793 francs); the lowest from the districts of Berne (5,396,209 francs) and Geneva (5,369,289 francs). The total exportation rose from 37,256,642 francs in 1864, its minimum, to 101,225,747 francs in 1882 and declined to 91,571,282 francs in 1890.

Table showing the exports from Switzerland to the United States in 1890 by consular districts.

Consular districts.	Raw silk and silk goods.	Cotton and woolen tissues.	Embroideries.	Straw and horse-hair tissues.	Watches and watch materials.	Musical boxes.
	Francs.	*Francs.*	*Francs.*	*Francs.*	*Francs.*	*Francs.*
St. Gall	527,407	2,153,823	37,488,943	.....	.....	.....
Zurich	8,036,088	174,904	65,210	1,033,462	.....	.....
Horgen	6,664,532	.....	.....	75,279	.....	.....
Basle	10,106,561	1,740,363	.....	23,035	7,905,838	90,375
Berne	493,849	336,920	.....	144,451	124,855	.....
Geneva	.....	.....	.....	.....	1,918,118	1,467,702
Total	25,828,437	4,406,010	37,554,153	1,276,227	9,948,811	1,558,077

Consular districts.	Cheese.	Leather.	Aniline colors.	Miscellaneous.	Total.	
					1890.	1889.
	Francs.	*Francs.*	*Francs.*	*Francs.*	*Francs.*	*Francs.*
St. Gall	.....	.....	.....	168,899	40,339,072	33,932,585
Zurich	.....	.....	.....	278,292	9,587,956	7,436,242
Horgen	68,175	.....	.....	698,972	7,506,958	7,862,946
Basle	418,397	826,760	926,878	1,333,591	23,371,798	18,313,642
Berne	4,155,679	.....	.....	140,455	5,396,209	4,821,900
Geneva	.....	1,177,480	3,071	802,918	5,369,289	4,670,628
Total	4,642,251	2,004,240	929,949	3,423,127	91,571,282	77,037,943

Table showing the exports from Switzerland to the United States from 1864 to 1890, inclusive.

Years.	Raw silk and silk goods.	Cotton and woolen tissues.	Embroideries.	Straw and horse-hair tissues.	Watches and watch materials.	Musical boxes.
	Francs.	*Francs.*	*Francs.*	*Francs.*	*Francs.*	*Francs.*
1864	25,451,928	1,647,335	352,277	806,700	8,477,192	72,482
1865	29,970,464	4,268,900	1,132,231	1,521,184	11,301,954	108,399
1866	31,766,072	5,173,296	3,236,138	3,179,795	13,093,408	300,108
1867	18,818,073	2,038,330	3,154,087	2,432,405	10,362,418	265,196
1868	21,197,593	1,242,910	3,050,127	2,102,497	10,469,728	344,448
1869	28,552,883	2,253,135	3,896,701	2,802,764	13,322,578	258,738
1870	35,844,786	1,194,850	6,962,403	3,884,064	16,512,162	341,148
1871	42,928,017	1,974,496	10,293,787	3,106,693	17,105,752	350,637
1872	40,760,941	2,648,277	11,437,174	1,324,750	18,312,511	441,852
1873	27,060,929	2,934,829	10,853,320	2,209,634	13,054,147	433,573
1874	25,083,566	1,460,361	16,403,314	1,609,174	12,119,941	252,817
1875	23,401,405	688,237	15,912,519	1,683,653	8,499,501	186,523
1876	26,613,469	740,531	14,580,501	2,477,846	4,809,822	141,357
1877	26,922,791	481,495	16,195,602	1,580,287	3,569,048	102,105
1878	27,601,539	751,969	16,690,107	1,201,529	3,995,716	95,679
1879	37,374,245	1,187,999	18,923,535	1,948,493	5,292,098	187,759
1880	40,414,646	1,912,382	22,549,195	2,947,789	10,143,813	261,833
1881	33,110,390	2,473,798	20,059,905	3,347,595	11,809,122	447,599
1882	45,122,069	2,824,958	28,432,728	1,584,174	13,238,489	582,799
1883	39,773,671	1,439,308	30,882,678	1,068,907	11,146,010	728,015
1884	33,464,939	1,146,249	31,563,973	815,716	7,469,704	999,385
1885	25,326,047	1,149,890	31,923,743	657,741	4,479,586	851,919
1886	24,863,565	1,864,586	35,024,181	661,258	6,682,457	1,134,775
1887	25,188,774	1,126,926	31,843,944	431,820	8,658,181	1,224,952
1888	25,780,478	1,931,492	30,300,209	762,974	9,374,935	1,244,275
1889	21,717,055	3,338,783	31,508,008	1,493,334	9,451,572	1,318,521
1890	25,828,437	4,406,010	37,554,153	1,276,227	9,948,811	1,558,077

Table showing the exports from Switzerland to the United States, etc.—Continued.

Years.	Cheese.	Leather.	Aniline colors.	Miscellaneous.	Total.
	Francs.	*Francs.*	*Francs.*	*Francs.*	*Francs.*
1864	241,573	22,125	.....	185,030	37,256,642
1865	490,895	.....	.....	486,022	40,280,049
1866	700,130	110,885	.....	1,098,541	58,658,373
1867	827,647	156,734	.....	1,205,428	39,260,318
1868	1,057,437	217,986	.....	1,622,265	41,304,991
1869	1,268,417	44,603	.....	1,531,609	53,931,428
1870	1,560,409	582,177	.....	2,308,245	69,190,244
1871	1,688,322	701,374	.....	2,526,602	80,675,680
1872	2,229,213	446,879	.....	1,879,506	79,481,103
1873	2,068,003	426,461	.....	1,350,913	60,391,809
1874	2,007,929	654,920	.....	1,759,909	61,351,931
1875	1,934,282	437,621	.....	2,123,614	54,867,355
1876	1,848,360	627,868	.....	1,644,190	53,483,944
1877	1,675,024	479,667	.....	2,019,426	53,025,445
1878	1,533,598	518,554	.....	2,209,187	54,597,878
1879	1,381,269	874,462	.....	2,371,841	69,541,701
1880	1,969,418	962,912	.....	3,243,920	84,405,908
1881	2,350,128	1,528,675	.....	4,204,554	79,332,766
1882	2,849,343	2,537,728	1,508,113	2,995,346	101,225,747
1883	3,142,142	2,622,960	570,553	2,713,733	94,087,977
1884	3,695,172	1,153,453	574,296	2,567,834	83,450,721
1885	3,015,839	665,058	577,652	2,345,439	70,992,914
1886	3,010,079	603,703	586,379	3,213,846	77,644,829
1887	3,582,021	377,342	757,278	2,565,971	75,757,209
1888	4,188,189	315,474	689,598	3,190,790	77,778,414
1889	3,744,933	270,892	931,967	3,262,878	77,037,943
1890	4,642,251	2,004,240	929,949	3,423,127	91,571,282

LYELL T. ADAMS,
Consul.

UNITED STATES CONSULATE,
Horgen, February 11, 1891.

MORMONS IN MEXICO.

REPORT BY CONSUL SAMPSON, OF PASO DEL NORTE.

Mormon colonists commenced locating in the State of Chihuahua, Mexico, 125 miles southwest of Paso del Norte and 85 miles south of Denning, N. Mex., in 1886.

In the Corralitos, Ascension, and Casas Grandes valleys they have five colonies, namely: Colonias Diaz, Juarez, San Francisco, Pacheco, and Cave Valley—the two first being the most prominent, Diaz having a population of 700 and Juarez of 500—with a total population of over 2,000. The most of these colonists have come from Arizona and New Mexico, only a few from Utah. The church at Salt Lake City is the recognized ecclesiastical head or authority. It is said that plural marriages are not permitted.

These colonists are engaged in stock-raising, manufacture of lumber, bee culture, fruit-growing, and raising of sorghum for the manufacture of sugar and sirup. The sugar beet does well there also, while sorghum grows to

perfection; this is expected to become quite an industry in time. A sugar plant will be established this summer; also a cannery at no distant day; there is not one now in all Mexico. Negotiations are pending to start a cannery in this city. It will be a good investment.

The climate is very fine. Spring work commences in February. Everything has to be grown by irrigation. There is an abundance of water. Two mills are now in operation sawing lumber for market. All trades and needed professions are represented. The people seem to be happy and prosperous. They have two public schools established, with an average attendance of about 250 pupils. The colonists own about 100,000 acres of land. This is held by a corporation organized under the laws of Colorado, and known as the Mexican Colonization and Agricultural Company. No land is sold to the colonists; they are charged a nominal rent for use. No one can claim to be rich, yet all seem to be comfortably fixed.

These colonies are now remote from railroads, the nearest point being Denning, N. M. It is expected, however, that the Mexico Pacific Railroad will be completed to Ascension by August, or within 3 miles of one of these colonies.

Additions are expected to be made during the year, and a large Mormon population will soon find homes in this consular district.

A. J. SAMPSON,

UNITED STATES CONSULATE, *Consul.*

Paso del Norte, March 6, 1891.

PETROLEUM TRADE OF RUSSIA.

REPORT BY CONSUL CHAMBERS, OF BATOUM.

The following statistics of the trade of Batoum for 1889 and 1890 may be of interest, showing, as they do, the increasing commercial importance of the port.

EXPORTS TO THE UNITED STATES FROM BATOUM.

Table showing the declared exports to the United States from the Batoum consulate in 1889 and 1890.

Articles.	1890.		1889.
	Quantity.	Value.	
	Tons.		
Licorice root	6,692	$254,842.09	$107,828.57
Persian wool	51	16,289.19	61,012.84
Caucasian wool	949	249,072.03	111,074.25
Turkestan wool	.....	.....	5,580.93
Manganese ore	7,450	96,349.66	1,512.78
Goat skins	.....	5,175.39	542.07
Walnut wood	11	431.42	.....
Carpets	.....	398.38	336.89
Total	.....	622,558.16	287,888.33

Much of the export to the United States in 1890 was by steamer via Marseilles, Antwerp, and United Kingdom ports, but during the year nine sailing vessels with licorice root and manganese ore cleared from Batoum, and two steamers with manganese ore cleared from Poti for United States ports.

The exports of both licorice root and manganese ore to the United States in 1890 show a heavy increase over 1889. What the manganese export for 1891 will be it is impossible to say, but the prospects for a great increase in exports of licorice root seem good, as there are now three firms engaged in the business, against only one exporter in 1890.

NAVIGATION AT BATOUM.

Table showing the number and tonnage of vessels entered and cleared at Batoum in 1889 and 1890.

ENTERED.

Flag.	1889.				1890.			
	Sail.		Steam.		Sail.		Steam.	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
Austrian	7	3,686	66	52,084	15	8,281	73	66,964
Belgian	.....	.....	3	3,966	.....	.....	4	4,792
Danish	.....	.....	13	14,716	.....	.....	13	14,866
Dutch	.....	.....	.....	.....	.....	.....	2	1,472
English	1	622	215	269,407	.....	.....	241	314,961
French	.....	.....	55	73,220	.....	.....	56	83,075
German	.....	.....	29	33,839	.....	.....	32	39,139
Greek	88	32,347	20	17,920	98	36,520	10	9,070
Italian	12	4,409	3	3,319	8	5,669	1	1,049
Norwegian	.....	.....	7	9,188	.....	.....	12	16,281
Russian	72	7,560	90	80,448	56	7,560	178	159,400
Turkish	116	28,641	7	3,188	69	19,584	2	962
Total	296	77,265	508	561,287	246	77,614	624	721,031

CLEARED.

Austrian	9	4,730	65	51,386	14	7,261	74	68,052
Belgian	.....	.....	3	3,966	.....	.....	4	4,792
Danish	.....	.....	13	14,716	.....	.....	13	14,866
Dutch	.....	.....	.....	.....	.....	.....	2	1,472
English	1	622	219	274,277	.....	.....	242	316,189
French	.....	.....	53	70,534	.....	.....	57	84,936
German	.....	.....	29	33,839	.....	.....	32	39,139
Greek	86	31,100	20	17,920	97	36,272	10	9,079
Italian	11	4,387	3	3,319	8	5,669	1	1,049
Norwegian	.....	.....	6	7,804	.....	.....	13	15,781
Russian	75	7,890	93	83,260	55	7,286	182	198,310
Turkish	115	30,198	8	3,715	66	18,693	2	962
Total	297	78,927	512	564,736	240	75,181	632	756,618

BATOUM EXPORTS AND IMPORTS.

Table showing the Batoum exports and imports for 1889 and 1890.

EXPORTS.

Articles.	1889.	1890.
	Tons.	*Tons.*
Manganese	11,492	9,510
Licorice root	2,505	6,585
Wool	8,060	5,853
Corn	13,590	5,827
Wheat	360	.....
Cotton	800	.....
Walnut wood	2,995	3,424
Boxwood	1,966	2,066
Oak wood	930	250
Dried raisins	.....	2,036
Sheepskins	.....	735
Bullock skins	295	619
Goatskins	346	.....
Linseed	710	447
Madder	.....	270
Silk cocoons	145	521
Silk goods	270	64
Carpets	63	246
Dried guts	.....	182
Dyewoods	574	.....
Persian powder	93	.....
Wine	18	154
Camomile flower	240	126
Pistachio nuts	.....	56
Tobacco	16	47
Zinc ore	196	25
Extract of licorice	76	19
Total	45,740	39,062

IMPORTS.

Tin plates	15,649	21,289
Lumber	35,698	56,514
Iron, machinery, etc	7,890	11,340
Iron pipes	2,390	634
Sulphur	3,340	2,324
Caustic soda	1,896	3,978
Coal	3,980	2,734
Bricks	2,430	2,365
Earthenware pipes	116	294
Tin	264	686
Lead	139	921
Nails	66	.....
Copper	49	.....
Pig-iron	440	.....
Sheet-iron	176	.....
Cement	730	1,084
Window glass	47	135
Alum	65	.....
Gunpowder	25	.....
Lime	.....	930
Total	75,390	105,228

PETROLEUM TRADE.

The Russian petroleum trade in 1890 shows a marked increase over 1889. The production of crude oil, as will be seen from statistics herewith, averaged nearly 80,000 barrels per day, against a trifle over 68,000 barrels in 1889—a very material increase, notwithstanding which the price of crude oil at wells steadily advanced until it reached at the end of July the equivalent to about 50 cents per barrel of 42 gallons. Owing to the low prices in foreign markets and the great advance in the value of Russian currency (as against foreign exchange), the price of refined did not advance proportionately with crude, and the high price of 50 cents per barrel was not maintained for any length of time; in fact, it is doubtful if any crude was sold at that price, but much was sold at from 35 to 40 cents per barrel, and that price maintained, notwithstanding the decrease of production in the last half of the year, until the Volga navigation closed, about the end of October. The closing of Volga navigation leaves the railway to Batoum the only outlet for the winter months, and, as the demand for oil was less than the supply during November and December, the price of crude at wells declined to about 25 cents per barrel, although 30 cents was asked for contracts for the year. The production was increased in November by several flowing wells, but, as they did not last long, the December production fell off, and up to the 1st of February this year there was no material increase over the figures for December. Early in February, however, four wells commenced flowing, giving an aggregate of 50,000 to 60,000 barrels daily, and at present writing the total daily production is not less than 125,000 barrels per day. Of course, this immense increase has greatly depressed the price of crude, and it is at present quoted at about 12 cents per barrel for spot and 20 cents per barrel for a year's contract.

The high prices for crude during the past 18 months naturally greatly stimulated drilling, and on December 31, 1890, there were produced 238 wells; drilling, 130; cleaning out and drilling deeper, 46; new derricks up, 79; against 217 wells producing, 79 drilling, 29 cleaning out and drilling deeper, and 46 derricks on December 31, 1889.

It is not probable that the present immense production will be long maintained, as the large flowing wells seldom last long; but, from the volume of operations, it would seem that, providing the territory is sufficiently rich, the production of 1890 will be maintained in 1891.

The export of petroleum in 1890 was increased, but was greatly obstructed by the low prices of American oil in the foreign markets and the great advance in value of Russian currency. The value of the paper ruble, starting at about 54 cents in January, advanced to the equivalent of 65 cents in September, but gradually declined again to 56 and 57 cents in December. Of course, the purchasing power in Russia of the ruble did not increase, and the price of refined at Baku and Batoum remained about the same in the currency of the country in September as in January, or at least declined very little; and the appreciation of the ruble (as against foreign values) was equiva-

lent to an advance of 20 per cent. in price, and, under the circumstances, it was asserted by exporters that business at these prices resulted in a loss. The statistics herewith show a total increase in the output of all petroleum products in 1890 over 1889 of 36,342,075 gallons, of which 4,064,840 gallons went to Russia, leaving the increase in exports 32,277,235 gallons, of which 12,122,735 gallons were crude, crude residuum, and lubricating oils and 2,641,680 gallons illuminating oil and distillate to Austria-Hungary and Roumania (for Servia), from which countries American oil is debarred by a customs tariff discriminating in favor of Russian oil, leaving the actual increase of export of illuminating oils in competition with American oil 17,512,820 gallons. As the actual increase in the export of case oil was 19,265,355 gallons, there was a decrease in the export of illuminating oils in bulk and barrels.

That the output in 1890 was limited only by the price, and not by lack of oil or transportation facilities, is evidenced by the increase of stocks here. The railway deliveries at Batoum for the year were more than 10,000,000 gallons in excess of the output, and, notwithstanding the fact that the price of refined oil at Baku and Batoum has been steadily declining since October and for 2 months was less than the cost of production on the basis of crude prices and the railway capacity has been increased to at least 340,000,000 gallons annually, the output from Batoum has been less for the past 2 months than it was during the same time last year. Refined at present is almost unsalable here at 3¾ cents per gallon free on board steamer, because the tankage at Batoum is full (over 40,000,000 gallons), and exporters claim foreign markets are too low to justify even that price, notwithstanding sea freights were never so low in the history of the trade.

Railway transportation between Baku and Batoum, as before stated, was greatly increased by the completion of the Suram tunnel, which was officially opened for traffic in September, although the work of changing the approaches to it is not yet completed. The old track from the western end of the tunnel is used now, and, together with the line over the pass, gives the railway a capacity of not less than 340,000,000 gallons per annum. The tunnel is prepared for double track, and when the change in the contour of the western approach to it is finished and the tunnel double-tracked the capacity of the roads will be still further increased. The railway company has decided to purchase all private tank cars now in service on its line at a price equivalent to about $625 each (they cost originally more than $1,000 each), and those who do not wish to sell at this price will be given a certain time to take their cars off the road. As owners of private tank cars (there are more than 4,000 in service) were allowed a drawback equivalent to about 13 cents per barrel from freight rates, the taking over of the private tank cars will be equivalent to an advance in freight of that amount.

The following are all the statistics pertaining to the trade which I have been able to obtain:

Table showing the crude petroleum production of Balakhani, Sabunchi, and Bibi-Eibak in 1889 and 1890.

Month.	Crude, piped to refineries.	Lake oil and crude, piped and shipped by rail.	Estimated for fuel and evaporation.	Stock at wells at end of month.	Total.	Stock at wells at beginning of month.	Total production for month.
	Barrels.	*Barrels.*	*Barrels.*	*Barrels.*	*Barrels.*	*Barrels.*	*Barrels.*
January	1,552,030	28,226	108,456	972,668	2,661,380	730,866	930,514
February	2,189,380	22,982	146,256	1,161,163	3,519,701	972,668	2,547,033
March	2,642,450	17,401	181,200	1,073,743	3,914,794	1,161,163	2,753,631
April	2,485,282	50,107	167,532	888,645	3,591,566	1,073,743	2,517,823
May	3,006,942	53,581	195,840	722,017	3,978,380	888,645	3,089,735
June	2,429,747	78,425	163,444	337,672	3,009,288	722,017	2,287,271
Total, 6 mos.	14,305,751	250,722	962,728	5,155,908	20,675,109	5,549,102	15,126,007
July	2,273,179	14,234	152,282	202,959	2,642,654	337,672	2,304,982
August	2,218,045	6,358	148,800	104,024	2,477,227	202,959	2,274,268
September	2,099,621	7,549	140,916	158,471	2,406,557	104,024	2,302,533
October	2,171,248	7,637	146,101	175,293	2,500,279	158,471	2,341,808
November	2,057,028	5,716	138,120	467,666	2,668,530	175,293	2,493,237
December	2,101,339	4,206	140,918	573,096	2,819,559	467,666	2,351,893
Total for year	27,226,211	296,422	1,829,865	6,837,417	36,189,915	6,995,187	29,194,728

Month.	1890.			1889.		
	Average daily production.	Daily average from flowing well.	Daily average from pumping well.	Average daily production.	Daily average from flowing well.	Daily average from pumping well.
	Barrels.	*Barrels.*	*Barrels.*	*Barrels.*	*Barrels.*	*Barrels.*
January	62,275	6,654	55,261	47,459	.....	.....
February	90,965	35,800	55,165	56,404	.....	.....
March	88,827	29,212	59,615	60,836	.....	.....
April	81,473	23,080	58,393	64,171	.....	.....
May	99,669	37,533	62,136	65,287	.....	.....
June	76,242	14,200	61,942	89,827	.....	.....
Average, 6 months	83,569	24,303	59,266	60,439	.....	.....
July	74,354	11,952	62,402	79,294	11,600	67,694
August	73,363	5,000	68,363	87,969	23,097	64,872
September	76,751	5,464	71,287	76,551	9,956	66,595
October	75,542	6,160	69,382	66,778	3,950	62,828
November	83,108	14,356	68,752	77,258	18,085	59,173
December	75,867	8,625	67,242	68,894	14,210	54,684
Average for year	79,985	16,376	63,609	68,341	.....	.....

NOTE.—In barrels of 42 gallons.

Total shipments of Russian petroleum products from Batoum in 1889 and 1890.

Whither exported.	Crude and residuum.		Lubricating oil.		Illuminating distillate.	
	1890.	1889.	1890.	1889.	1890.	1889.
Austria:	*Gallons.*	*Gallons.*	*Gallons.*	*Gallons.*	*Gallons.*	*Gallons.*
Fiume	.....	.....	822,825	13,250	17,046,885	20,529,830
Trieste	44,165	8,800	366,300	403,700	5,935,510	1,112,305
Belgium	3,213,725	625,300	4,716,050	783,900	.....	78,990
Bulgaria	.....	.....	3,250	.....	.....	.....
England	694,200	628,750	868,050	345,800	.....	.....
France	2,081,100	2,099,535	7,544,020	6,141,860	.....	.....
Germany	50,000	59,550	4,889,435	1,966,750	25,000	1,525,990
Holland	98,550	63,800	142,500	594,950	.....	13,500
Italy	.....	.....	299,150	102,250	.....	.....
Roumania	101,220	.....	143,450	139,700	1,635,155	.....
Spain	.....	.....	.....	5,000	303,150	.....
Turkey	.....	.....	32,600	6,600	.....	.....
Africa	.....	.....	3,750	.....	.....	.....
Greece	.....	.....	500	.....	.....	.....
Norway	.....	.....	.....	2,600	.....	.....
Total	6,282,950	3,485,735	19,831,880	10,506,360	24,945,700	23,260,525
Russia	657,230	663,950	677,550	128,300	1,803,915	145,000
Total shipments	6,940,180	4,149,685	20,509,430	10,634,660	26,749,615	23,405,525

Whither exported.	Refined oil.		Total.	
	1890.	1889.	1890.	1889.
Austria:	*Gallons.*	*Gallons.*	*Gallons.*	*Gallons.*
Fiume	1,750	726,695	17,871,460	21,269,775
Trieste	6,355,395	8,372,150	12,701,370	9,896,955
Belgium	10,145,690	12,358,735	18,075,455	13,846,835
Bulgaria	1,167,530	1,104,320	1,170,780	1,104,320
Cochin China	673,830	718,100	673,830	718,100
China	7,733,090	8,276,110	7,733,090	8,276,110
Egypt	6,418,390	8,153,840	6,418,390	8,153,840
England	35,953,285	33,304,820	37,515,535	34,279,370
France	802,000	194,000	10,427,120	8,435,395
Germany	2,121,110	3,220,460	7,085,545	6,772,750
Holland	2,163,500	1,518,070	2,306,000	2,113,020
India	33,030,870	23,722,690	33,030,870	23,722,690
Italy	11,853,645	11,362,170	12,251,345	11,541,720
Malta	718,825	267,150	718,825	267,150
Roumania	2,100,715	1,144,210	3,980,540	1,283,910
Spain	105,000	50,000	408,150	55,000
Turkey	22,591,100	20,752,130	22,623,700	20,758,730
Japan	7,332,410	7,180,800	7,332,410	7,180,800
Java	13,181,510	5,245,100	13,181,510	5,245,100
Siam	721,380	592,730	721,380	592,730
Manila	2,362,670	700,000	2,362,670	700,000
Africa	287,000	387,090	290,750	387,090
Greece	.....	.....	500	.....
Norway	.....	.....	.....	2,600
Total	167,820,695	149,351,370	218,881,225	186,603,990
Russia	18,236,940	16,373,545	21,375,635	17,310,795
Total shipments	186,057,635	165,724,915	240,256,860	203,914,785

Table showing exports of petroleum products from Russia in 1888 and 1889.

Whence exported.	Illuminating products.		Other products.	
	1888.	1889.	1888.	1889.
By sea.	*Gallons.*	*Gallons.*	*Gallons.*	*Gallons.*
Batoum	129,654,485	172,511,895	13,888,625	13,992,095
Baltic ports	13,832,845	8,850,000	4,734,685	5,405,000
Baku to Persia	1,300,455	2,311,721	2,078,660	859,830
Total	144,787,785	183,673,616	20,701,970	20,256,925
By rail.				
Warsaw	8,035,000	11,675,000	590,000	1,410,000
Radjiwiloff	10,000	.....	5,000	.....
Wolochisk	375,000	185,000	190,000	175,000
Wirbollen	495,000	450,000	15,000	.....
Meav	1,795,000	2,280,000	5,000	.....
Alexandroff	300,000	.....	.....	.....
Sosnovitza	1,310,000	.....	20,000	20,000
Other points	195,000	445,000	330,000	80,000
Total	12,515,000	15,035,000	1,145,000	1,685,000
Grand total	157,302,785	198,708,616	21,846,970	21,941,925

Whence exported.	Total.		Increase or decrease in 1889.
	1888.	1889.	
By sea.	*Gallons.*	*Gallons.*	*Gallons.*
Batoum	143,543,110	186,503,990	+42,960,880
Baltic ports	18,567,530	14,255,000	— 4,312,530
Baku to Persia	3,379,115	3,171,551	— 207,564
Total	165,489,755	203,930,541	+38,440,786
By rail.			
Warsaw	8,625,000	13,085,000	+ 4,460,000
Radjiwiloff	15,000	.....	— 15,000
Wolochisk	565,000	360,000	— 205,000
Wirbollen	510,000	450,000	— 60,000
Meav	1,800,000	2,280,000	+ 480,000
Alexandroff	300,000	.....	— 300,000
Sosnovitza	1,320,000	20,000	— 1,300,000
Other points	525,000	525,000	.....
Total	13,660,000	16,720,000	+ 3,060,000
Grand total	179,149,755	220,650,541	+41,500,786

JAMES C. CHAMBERS,
Consul.

UNITED STATES CONSULATE,
Batoum, February 20, 1891.

AMERICAN FLOUR TRADE IN GLASGOW.*

REPORT BY CONSUL BROWN.

For some time past I have been cognizant of conditions in relation to the transportation of an important export product of the United States—that of flour—which, if not remedied, and that too in the near future, must result in a serious falling off, if not the distraction, of that branch of the export trade of our country, at least so far as Glasgow and Great Britain are concerned. The importance of that trade to the American producer is well known. This ruinous handicapping of the flour export trade of the United States has been especially impressed upon me recently. The business is so seriously hampered by the unreasonable conditions imposed by the transportation companies that representatives of the Glasgow Corn Trade Association have lately called upon me urging that something might be done to save the trade from ruin, and at the same time presented a written statement of their grievances graphically set forth and supported by documentary proofs.

A recital of a few of the facts presented by these gentlemen, together with the exhibits herewith inclosed, will be found, I trust, a sufficient excuse on my part for calling the attention of the Department to the danger of loss to our people by the breaking down of an export trade of great magnitude. I may remark, as indicating the importance of the trade, that certainly no fewer than 1,250,000 sacks of American flour of 280 pounds each were bought by Glasgow dealers alone last year. I am assured that this very large total would have been much larger but for the conditions hereafter mentioned. Similar conditions do not exist as to the importations of Hungarian and other than American flour.

It will be noticed, by reference to the communication of the committee above referred to, herewith inclosed, that the bills of lading furnished by the transportation companies, and which the American miller is compelled to accept, are primarily the cause of all the complaint, because they are so worded that said companies are practically absolved from all liability, save only to deliver the goods at some future time—a very remote time, it often turns out—and in such a condition as chance may find it. Samples of the kinds of bills of lading made use of by several companies, all substantially alike, are herewith sent. The courts on this side, I am told, hold the parties to the strict wording of the bills of lading. While our own courts hold that transportation companies can not absolve themselves from the usual liabilities of common carriers through bills of lading, however carefully drawn for that purpose, the receivers here, being so far away, are practically helpless in cases where the fault is with the carrying companies in the United States. I may add that I believe that in a majority of cases the delay and loss is occasioned by the ocean carrying companies. I visited a warehouse a few days ago, when

*See Consul-General New's report on the same subject in No. 127, for April.

my attention was called to 27 sacks of flour out of a single shipment—and a small one at that—from each of which, owing to careless handling (no other reasonable cause could be assigned), 50 to 200 pounds of flour had been lost; yet no redress is obtainable, and if the consignee asks for damages he is informed that by the terms of the bill of lading they (the transportation company) are not liable, and payment is declined. But by far the most serious cause of complaint appears to be the delay of transit, numerous examples of which are herewith furnished.

It appears that these bills of lading are so worded that the receiving railway company has the privilege of forwarding by any line of steamers they choose and has actually, in some cases, shipped the flour to some other port than that of final destination, from thence to be transshipped to this port; nor are they bound to deliver the goods within any specified time. It is a common occurrence for consignments of flour from any of the interior shipping points of the United States to be from 100 to 200 days in transit, and in many cases a much longer time elapses after shipment before the flour is received.

The terms of all purchases are 60 days after sight (of the bills of lading), say 70 to 75 days after shipment of the flour.

It is not difficult to understand that, when the buyer here, in addition to all the other drawbacks and losses, must calculate on lying out of the use of his money for from 3 to 6 months, and at the same time buy so as to provide against fluctuations and possible decline of value, he must provide a wide margin (paid, in fact, by the producer in America) or go out of the business altogether. Of the hundreds of examples of delays herewith given (exhibit "C"), I desire to call particular attention to a part of the same exhibit, but marked "D," submitted by Messrs. Bruce & Wilson, where it is shown that £4,820 19*s.* 11*d.* (nearly $25,000) have been paid for flour shipped from the United States, ranging in dates of shipment from November 30, 1889, to November 24, 1890, of which, up to this date (February 20, 1891), not a single sack has been received, and they have no knowledge as to the time of probable arrival.

One would think that the transportation companies would realize that such conditions are "killing the goose that lays the golden egg" for them; but the facts remain the same. I have but to call your attention to the inclosures as follows: Statement of committee, marked "A;" sample bill of lading, marked "B;" evidence of delay in transit, marked "C;" special, marked "D;" sample bill of lading desired by shippers and purchasers, marked "E."

L. W. BROWN,
Consul.

UNITED STATES CONSULATE,
Glasgow, February 21, 1891.

LETTER OF THE GLASGOW CORN TRADE ASSOCIATION TO CONSUL BROWN.*

[Inclosure in Consul Brown's report.]

GLASGOW, *February 4, 1891.*

SIR: The undersigned have been appointed by a committee of the Glasgow Corn Trade Association to appear before you for the purpose of drawing your attention, as consul of the United States of America at our port, to the numerous grievances importers of flour have to contend with in the conduct of their business with your country, and we respectfully ask your assistance in our efforts to have them removed.

It may be well to explain to you the method under which the transactions are completed, although we have no doubt you are already well informed on the subject.

When flour is sold by American millers to British buyers, the terms of settlement almost invariably are by draft at 60 days sight, to which are attached bill of lading for, and insurance certificate on, the flour covered by the draft. These documents are given up only on maturity of the draft, or, if required earlier through the arrival of the goods, on payment of the amount, less rebate for the unexpired time. It will therefore be seen that the American miller has absolutely no risk of making bad debts; therefore, it is incumbent on him to give his customer a good title to his property; but, under existing circumstances, he does not do so.

Individual importers have for years made claims upon the transportation companies for losses they have sustained, and for which they think the carriers should be responsible, but, owing to the terms of the bills of lading, importers are invariably left without redress. Last year, however, the grievances became so clamant that a convention of Liverpool, London, Bristol, and Glasgow corn trade associations, with representatives from Dublin and Belfast, was held in Liverpool to endeavor to arrive at a general agreement in this matter, and our appearance before you is the result of that meeting.

The bills of lading upon which nearly all flour is shipped are issued from western points and signed by an agent on behalf of the railroad company and of said steamer or steamship company severally, but not jointly. This signature may be binding on the American transportation company, but when receivers here raise a claim against the steamship company they are met with the defense that the party attaching the signature to the bill of lading had no authority from them to do so and decline to accept any responsibility.

Frequently a portion of the quantity signed for is never shipped, and instances can be given where flour has been sold by the American railroad companies on account of damage, without any advice being given either to the shipper of the goods or receiver here.

It will be seen from these bills of lading that all through the documents they are assumed to be mutual agreements, and the highest court of our realm has decided that by the clause, "In accepting this bill of lading, the shipper, owner, and consignee of the goods and the holder of the bill of lading agree to be bound by all of its stipulations, whether written or printed, as fully as if they were all signed by such shipper, owner, consignee, or holder," the contract is binding on the receivers.

The absurdity of this clause will be apparent by reference to a clause reading: "It is also agreed that, in case the whole or any part of the property specified herein be prevented from any cause from going on the first steamer of the line above stated leaving after the arrival of such property at said port, the railroad company or its connections shall be at liberty to forward the same by succeeding steamers of said line, or, if deemed necessary by them, in the steamers of any other line." According to that clause, they are not bound to ship by the line named in the bill of lading, and frequently shipments come forward by other lines than the one specified. It is a question whether by this action insurance certificates are not rendered invalid.

When the receivers' position in terms of the following clause, "The property covered by this bill of lading is subject to all the conditions expressed in the customary forms of bills of

*The publication of the other inclosures in Consul Brown's report was not deemed necessary.

lading in use by the said steamships or steamship companies at time of shipment," is considered, it is evident that the shipper has accepted on his (receiver's) behalf a bill of lading which incorporates a document the terms of which can not be known, as every ocean carrying company has a form of bill of lading of its own.

As to the clauses exempting the carriers from responsibility, we do not think it necessary to do more than call your attention to some of the more glaring ones. "Not responsible for loss or damage by dirt, wet, fire, or loss of weight, nor shall the railroad company nor any of its connections—inland or ocean—be liable for any delay, nor shall they or any of them be liable for said goods, otherwise than as warehousemen."

Too often considerable portions of the goods signed for are tendered soiled by dirt, torn by careless handling, burst, and the bags occasionally half empty. The above clause entirely precludes the receiver of the goods from recovering loss from above causes, even though the damage has been caused entirely through careless handling.

This clause also protects the carriers from responsibility for unreasonable delay in transit. By far the most serious and irritating cause of loss, as well as one of the greatest impediments to the development of the American flour trade, is the great irregularity of time goods take in transit. Sometimes goods come from points as far west as St. Louis and Minneapolis to our port in 21 days, while other parcels from same points take 3, 4, 6, and even more than 8 months. It is impossible for the American miller, therefore, to regulate his shipments in such a way as will enable him to compete in the matter of regularity of delivery with his competitor, the local miller, who can satisfy the wants of his buyer from day to day.

We may also mention that Continental millers shipping here can regulate their shipments much more satisfactorily. American millers are consequently placed in this respect at a great disadvantage, not only as against local millers, but as compared with shippers of flour from all other parts of the world.

There ought to be a limit to the time allowed the transportation companies for shipment from the seaboard, and we are of opinion that 30 days from date of bill of lading would be a reasonable period.

"Thieves, vermin, barratry of mariners, restraints of princes and rulers or peoples and resulting from strikes or mobs, sweating; insufficiency of package in size, strength, or otherwise; leakage, breakage, pilferage, wastage, rain, spray, rust, frost, decay, hook marks or injury from hooks, stowage; contact with, or smell or evaporation from, any other goods; inaccuracies in obliteration; insufficiency or absence of marks, numbers, or addresses, or description of goods shipped; injury to, or soiling of, wrappers or packages, however caused; lighterage to or from the vessel, transshipment, jettison, explosion, heat; fire, at sea or on shore, at any time or in any place; boilers, steam, machinery (including consequences of defect therein, or damage thereto); collision, stranding, heeling over, upsetting, submerging, or sinking of ship in harbor, river, or at sea, or admission of water into the vessel, straining, or other perils of the seas, rivers, navigation, or land transit, of whatever nature or kind, and however caused; and all damage, loss, or injury, arising from the perils or things above mentioned, and whether such perils or things arising from the negligence, default, or error in judgment of the pilot, master, marines, engineers, stevedores, or other persons in the service of the shipowner, or whether occurring previously or subsequently to the vessel's sailing, or by unseaworthiness of the ship at or after the commencement of the voyage (provided all reasonable means have been taken to provide against such unseaworthiness) always excepted. With liberty to sail with or without pilots, to make deviation, and to call at any intermediate port or ports for any purpose, and to tow and assist vessels in all situations. With liberty, in the event of the steamer putting back, or into any port, or otherwise being prevented from any cause from commencing or proceeding in the ordinary course of her voyage, to proceed under sail or in tow of any other vessel, or in any other manner which the shipowner shall think fit, and to ship and transship the goods by any other vessel."

It is impossible to conceive any damage the goods could sustain under almost any circumstances that would not be covered by above exceptions.

Not content with doing all they can to exempt themselves by these clauses, the shipping companies have inserted a clause: "Porterage of the delivery of the cargo, at their option, to be done by consignees of the ship at their tariff rates at the expense and risk of the receivers of the goods." By this means they assume the right of following the goods after they are out of their custody as carriers, not merely for the purpose of preventing receivers having the opportunity of tracing damage before the goods are removed from the quays, but also for the purpose of making further profit, as this class of work is more efficiently performed at lower rates by disinterested parties.

By preventing receivers from having the goods under their control while on the quays, many cases of damage, such as contact with petroleum, palm oil, etc., are hid from the owners of the goods, and only come to their knowledge when consumers lodge their complaints. For these losses it is impossible to recover in our law courts under these bills of lading.

What is wanted is a reasonable bill of lading, which will bind the carrying companies to deliver the goods entrusted to their care in good order (perils of the sea and the act of God excepted), and by which the receiver of the freight here should be responsible for any claim that can legally be established thereon, and in which a limit of time (say 30 days from date of dispatch) is fixed for shipment from the seaboard.

We trust you will see your way to recommend your Congress to pass an act which will compel all transportation and steamship companies to issue a bill of lading more in unison with the laws of common sense than those that have hitherto been foisted on the American millers.

ZOL RINTOL,
Chairman.
JNO. McDOUGALL,
Secretary.
JAMES WILSON,
Of Bruce & Wilson.
R. HUNTER CRAIG,
Of R. Hunter Craig & Co.
W. R. FARQUHAR,
Of Farquhar Bros.
WM. MORRISON, JR.,
Of William Morrison & Sons.
W. AREND,
Of M. Kasmack & Co.
WM. R. BALD,
Of James Bald & Co.
DAVID WELLS & CO.

EXPORT OF CEREALS FROM RUSSIA.

REPORT BY CONSUL-GENERAL CRAWFORD, OF ST. PETERSBURG.

According to the latest intelligence received from Odessa, the grain market is firmer, and in the second half of January business was done on an unexpectedly large scale. Such a movement has not been experienced for a long time. From the 12th to the 14th of February 144,000 bushels of wheat were sold; so that if the demand continues the stock will soon run out, inasmuch as fresh arrivals are daily decreasing.

The report of the ministry of finance, just published, shows that there has been an increase in the exports of cereals from Russia up to the present

time as compared with those of last year. The period given is from the 1st of January to the 16th of February, during which time the cereals exported from the principal custom-houses of the Russian Empire amounted to 478,602 tons, as against 463,320 tons exported during the same period in 1890, as follows:

Cereals.	January 1 to February 16—	
	1891.	1890.
	Tons.	*Tons.*
Wheat	174,564	162,720
Rye	63,576	102,560
Barley	57,708	74,934
Oats	98,136	84,150
Maize	84,438	38,952

It will thus be seen that Russia is gradually increasing her export of cereals, and even a far better showing for the present year is confidently anticipated.

J. M. CRAWFORD,
Consul-General.

UNITED STATES CONSULATE-GENERAL,
St. Petersburg, March 18, 1891.

IMPORTS OF MEXICO.

REPORT BY MINISTER RYAN.

For the information of the Department, I submit herewith the official statement, as published in the Diario Oficial (the official journal of the Government), of the 3d instant, of importations by countries into Mexico during the fiscal year ended June 30, 1889, from which it appears that the total imports from all countries is $40,024,894.32, an excess over the preceding year of $3,410,455.77.

It will be seen that more than one-half of these imports, to wit, $22,669,420.71, is from the United States, as against $6,337,980.30 from England, $4,956,568.41 from France, and $2,842,932.35 from Germany.

Of the imports from the United States, $10,293,301.64 are on the free list, as against a free list of $2,050,826.75 from England, $322,379.17 from France, and $299,136.87 from Germany.

Notice is drawn to the proportion of duties to value relatively of the imports of the countries: The United States' $22,669,420.71 paid $9,169,787.87 in duties, England's $6,337,980.30 paid $5,083,870.75, France's $4,956,568.41 paid $3,846,252.66, and Germany's $2,842,932.35 paid $2,310,015.60.

It is gratifying to note that the imports from the United States exceed those of the previous year by $3,404,747.45, and it is significant that this

increase substantially equals the excess of Mexico's total imports over the preceding year, to wit, $3,410,455.77.

It will be observed that of the imports from the United States the two items of cottons and nutritious substances amount to $5,949,872.41, or about one-half of all the dutiable imports from our country. These cottons, valued at $3,834,784.28, produced duties to the amount of $2,742,828.51; and the nutritious substances, consisting chiefly of farm products and manufactures thereof (but not embracing live animals or fresh meats), valued at $2,115,088.13, paid duties in the sum of $1,742,165.73.

Table showing the imports into Mexico during the fiscal year 1889.

Articles.	Arabia.		Algiers.		Australia.	
	Value.	Duty.	Value.	Duty.	Value.	Duty.
Nutritious substances			$8,788.00	$14,964.46	$320.00	$82.12
Medicinal drugs and chemical products	$82.00	$24.00	4,861.70	942.61		
Sundries					165.00	134.15
Total	82.00	24.00	13,649.70	15,907.07	485.00	216.27

Articles.	Brazil.		Chile.		China.	
	Value.	Duty.	Value.	Duty.	Value.	Duty.
Flax and hemp					$35.00	$9.53
Silks					19,264.00	8,235.36
Mixed					734.00	641.17
Nutritious substances			$108.00	$72.60	16,173.00	12,917.73
Stone and clay					146.00	15.68
Fancy notions					1,715.30	3,557.72
Arms, powder, and ammunition					5.00	4.42
Wood and its manufactures					30.00	10.62
Paper, cardboard, etc					145.00	3.28
Medicinal drugs and chemical products	$309.45	$230.82			918.80	668.37
Sundries					185.00	283.11
Total	309.45	230.82	108.00	72.60	39,351.10	26,346.99

Articles.	Japan.		Norway.		Persia.	
	Value.	Duty.	Value.	Duty.	Value.	Duty.
Nutritious substances			$19,582.25	$18,197.57	$78.00	$56.14
Glassware and porcelain	$4.00	$2.88				
Fancy notions	32.00	29.18				
Wood and its manufactures	43.00	28.19				
Paper, cardboard, etc			11,503.95	15,114.54		
Medicinal drugs and chemical products			90.00	46.73	24.00	17.75
Sundries	16.00	4.09				
Total	95.00	64.34	31,176.20	33,358.84	102.00	73.89

Table showing the imports into Mexico during the fiscal year 1889—Continued.

Articles.	Austria.		Belgium.		Bolivia.	
	Value.	Duty.	Value.	Duty.	Value.	Duty.
Free list	$6,161.00		$51,114.00			
Cottons	5,443.00	$5,572.37	19,245.40	$24,933.92		
Flax and hemp	415.50	593.23	19,883.24	22,842.59		
Wools	2,488.50	1,565.25	53,559.00	74,720.92		
Silks	151.00	142.48	30.00	111.04		
Mixed	921.00	779.81	708.00	1,125.61		
Nutritious substances	14,529.50	11,253.58	8,183.00	20,803.88	$550.00	$272.43
Stone and clay	18.00	25.73	1,616.00	696.91		
Glassware and porcelain	13,500.00	11,244.02	3,100.00	10,903.01		
Gold, silver, and platinum			11,000.00	44.14		
Iron and steel	1,720.00	1,092.22	18,045.00	16,746.23		
Copper and its alloys	2,514.00	1,650.80	85.00	71.69		
Tin, lead, and zinc	10.00	7.35	1,244.00	679.42		
Fancy notions	8,055.00	7,450.87	852.00	1,128.42		
Machinery and implements	8.00	4.99				
Vehicles, etc	850.00	511.25				
Arms, powder, and ammunition	96.00	158.90	7,154.75	6,497.58		
Wood and its manufactures	24,901.25	19,623.77	37.00	47.85		
Paper, cardboard, etc	5,590.75	8,603.85	7,322.00	14,012.75		
Furriers' supplies	1,542.00	716.48	1,985.00	544.36		
Medicinal drugs and chemical products	3,920.00	1,681.38	2,063.00	2,005.71	50.00	5.51
Sundries	3,602.15	2,135.78	34,857.50	34,371.65		
Total	96,436.65	74,814.11	242,083.89	232,287.68	600.00	277.94

Articles.	Ecuador.		Greece.		Guatemala.	
	Value.	Duty.	Value.	Duty.	Value.	Duty.
Free list					$5,638.00	
Cottons					1,391.25	$913.27
Flax and hemp					21.50	17.78
Wools					52.00	28.19
Silks					134.00	111.62
Mixed					34.00	15.21
Nutritious substances	$85,276.62	$37,599.46	$1,089.00	$462.66	971.69	634.28
Stone and clay					658.00	500.43
Glassware and porcelain					579.00	566.24
Iron and steel					97.98	13.94
Copper and its alloys					56.50	68.35
Tin, lead, and zinc					85.00	28.59
Fancy notions					133.00	63.82
Machinery and implements					113.00	19.19
Arms, powder, and ammunition					24.00	12.00
Wood and its manufactures					258.50	160.78
Paper, cardboard, etc					91.00	19.69
Furriers' supplies					97.00	24.01
Medicinal drugs and chemical products					850.30	342.99
Sundries	4,175.00	830.00			262.50	96.64
Total	89,451.62	38,429.46	1,089.00	462.66	11,548.22	3,636.93

Table showing the imports into Mexico during the fiscal year 1889—Continued.

Articles.	Colombia.		Costa Rica.		Denmark.	
	Value.	Duty.	Value.	Duty.	Value.	Duty.
Free list	$100.00		$100.00			
Cottons	6,058.50	$7,396.31				
Flax and hemp	9.00	6.34				
Wools	10.00	11.73				
Nutritious substances	67,354.00	23,843.77	22,325.00	$6,580.29	$1,112.00	$729.75
Stone and clay	8.00	2.25				
Fancy notions	3.25	2.06				
Furriers' supplies	700.00	76.39				
Medicinal drugs and chemical products	17.00	3.50				
Sundries	3,919.00	1,293.00				
Total	78,178.75	32,635.35	22,425.00	6,580.29	1,112.00	729.75

Articles.	Holland.		India.		Italy.	
	Value.	Duty.	Value.	Duty.	Value.	Duty.
Free list	$7,901.50		$7,065.00		$10,191.00	
Cottons	70.00	$142.95			192.00	$152.65
Flax and hemp	40.00	14.30	30.00	$18.17	105.00	68.67
Wools					769.00	1,457.28
Silks					225.00	216.80
Mixed					2.00	3.15
Nutritious substances	21,375.25	14,289.78	57,877.00	121,216.33	37,499.20	20,701.85
Stone and clay					12,240.00	8,647.58
Glassware and porcelain	3,282.00	5,850.30			768.00	679.93
Gold, silver, and platinum					3,987.00	97.72
Iron and steel	86.00	246.50			226.00	142.39
Copper and its alloys					475.00	274.98
Fancy notions			40.00	1.91	17,207.00	8,337.10
Vehicles, etc					88.00	9.51
Wood and its manufactures					525.00	409.73
Paper, cardboard, etc	14.00	.33			177,451.00	76,501.51
Medicinal drugs and chemical products	1,044.00	431.88	4,573.40	2,121.39	5,676.50	2,636.24
Sundries	38,196.50	32,034.78	44.00	4.59	2,200.00	1,481.69
Total	72,009.25	53,010.82	69,629.40	123,362.39	269,826.70	121,818.78

Articles.	Peru.		Portugal.		Argentine Republic.	
	Value.	Duty.	Value.	Duty.	Value.	Duty.
Free list	$386.00					
Nutritious substances	250.00	$230.99	$8,922.00	$2,542.46	$30.00	$32.25
Medicinal drugs and chemical products	136.00	116.05				
Sundries			210.00	114.00		
Total	772.00	347.04	9,132.00	2,656.46	30.00	32.25

Table showing the imports into Mexico during the fiscal year 1889—Continued.

Articles.	San Salvador.		San Domingo.		Russia.	
	Value.	Duty.	Value.	Duty.	Value.	Duty.
Cottons	$1,215.00	$1,286.12				
Flax and hemp					$135.00	$45.36
Nutritious substances	9,560.00	2,756.06	$80.00	$60.12	77.00	22.67
Fancy notions					340.00	131.03
Paper, cardboard, etc.	220.00	507.20				
Medicinal drugs and chemical products					281.40	187.59
Sundries	320.00	115.00				
Total	11,315.00	4,664.38	80.00	60.12	833.40	386.65

Articles.	Sweden.		Switzerland.		Uruguay.	
	Value.	Duty.	Value.	Duty.	Value.	Duty.
Free list			$3,244.00			
Cottons			54,095.50	$36,801.25		
Flax and hemp			170.00	196.79		
Wools			2,550.00	1,969.50		
Silks			11,645.00	11,266.27		
Mixed			2,973.75	2,825.77		
Nutritious substances			19,805.00	13,267.91	$2.00	$10.00
Stone and clay			54.00	19.95		
Glassware and porcelain	$257.00	$179.10	74.00	69.46		
Gold, silver, and platinum			2,122.00	126.22		
Iron and steel	1,192.00	1,779.49	235.00	68.45		
Copper and its alloys			100.00	43.80		
Fancy notions			12,635.00	4,930.64		
Machinery and implements			39,780.00	14,498.87		
Arms, powder, and ammunition			186.00	156.90		
Wood and its manufactures			80.00	79.10		
Paper, cardboard, etc.	106.00	267.25	784.00	666.60		
Furriers' supplies			5.00	2.43		
Medicinal drugs and chemical products	52.00	69.70	4,931.00	2,118.51		
Sundries			1,975.00	722.82		
Total	1,607.00	2,295.55	157,444.25	89,830.54	2.00	10.00

Articles.	Turkey.		Venezuela.		Zanzibar.	
	Value.	Duty.	Value.	Duty.	Value.	Duty.
Nutritious substances	$547.00	$367.21	$73,738.25	$25,435.75	$20.00	$37.76
Fancy notions	400.00	70.57				
Medicinal drugs and chemical products	1,380.00	323.51				
Total	2,327.00	761.29	73,738.25	25,435.75	20.00	37.76

Table showing the imports into Mexico during the fiscal year 1889—Continued.

Articles.	Germany.		Spain.	
	Value.	Duty.	Value.	Duty.
Free list	$299,136.87	.....	$448,685.30	.....
Cottons	357,593.51	$401,651.18	4,776.00	$6,137.95
Flax and hemp	120,909.39	104,380.57	2,517.00	1,245.83
Wools	244,438.07	271,870.64	4,444.00	3,990.43
Silks	27,153.00	24,969.43	7,023.00	4,282.97
Mixed	43,778.49	45,218.91	820.00	825.38
Nutritious substances	160,030.48	130,812.86	940,977.66	763,051.99
Stone and clay	7,715.50	7,830.12	5,764.00	1,788.95
Glassware and porcelain	164,317.40	206,539.11	2,655.00	1,599.11
Gold, silver, and platinum	114,161.50	15,615.89	10.00	12.50
Iron and steel	227,516.64	214,532.58	1,140.00	1,171.01
Copper and its alloys	129,093.95	79,786.75	624.00	132.96
Tin, lead, and zinc	27,302.50	17,916.34	563.00	387.79
Fancy notions	204,891.89	191,435.15	6,701.00	2,446.30
Machinery and implements	30,813.25	11,573.74	76.00	48.90
Vehicles, etc	1,965.00	1,552.24	.....	.....
Arms, powder, and ammunition	15,536.00	7,930.14	40,785.00	20,558.62
Wood and its manufactures	98,239.15	69,696.31	1,360.00	480.27
Paper, cardboard, etc	218,394.40	296,389.29	290,763.86	216,371.60
Furriers' supplies	68,035.71	38,128.99	1,648.00	1,239.67
Medicinal drugs and chemical products	109,182.38	60,915.07	14,708.30	4,822.06
Sundries	172,727.27	111,270.29	144,901.60	146,583.01
Total	2,842,932.35	2,310,015.60	1,920,942.72	1,177,177.30

Articles.	United States.		France.	
	Value.	Duty.	Value.	Duty.
Free list	$10,293,301.64	.....	$322,379.17	.....
Cottons	3,834,784.28	$2,742,828.59	480,883.15	$617,793.21
Flax and hemp	80,804.05	87,116.59	65,007.94	68,378.77
Wools	380,108.90	508,782.14	560,376.50	721,704.01
Silks	72,857.20	69,501.23	228,312.90	239,203.57
Mixed	48,619.17	48,158.78	269,201.70	288,232.47
Nutritious substances	2,115,088.13	1,742,165.73	1,144,355.46	749,921.34
Stone and clay	26,287.51	15,293.50	26,366.17	5,949.51
Glassware and porcelain	243,033.83	254,651.53	159,785.20	165,907.46
Gold, silver, and platinum	36,728.10	2,956.47	152,148.00	8,741.21
Iron and steel	815,225.38	565,752.24	107,050.49	84,944.67
Copper and its alloys	261,418.45	128,139.29	131,943.01	63,493.06
Tin, lead, and zinc	20,771.05	8,981.11	15,150.03	6,949.07
Fancy notions	236,454.09	176,189.53	144,811.80	98,156.52
Machinery and implements	436,736.90	88,880.75	28,594.20	12,034.82
Vehicles, etc	191,664.20	104,141.98	18,814.00	9,844.24
Arms, powder, and ammunition	200,914.61	130,356.78	8,717.68	4,912.15
Wood and its manufactures	301,649.19	247,451.14	39,436.26	26,163.02
Paper, cardboard, etc	378,395.76	355,719.51	228,833.35	149,321.94
Furriers' supplies	188,817.53	159,460.63	140,836.00	84,433.93
Medicinal drugs and chemical products	1,184,809.29	737,287.60	269,324.85	128,334.10
Sundries	1,320,951.45	995,972.81	414,240.55	311,833.59
Total	22,669,420.71	9,169,787.87	4,956,568.41	3,846,252.66

Table showing the imports into Mexico during the fiscal year 1889—Continued.

Articles.	England.		Total.	
	Value.	Duty.	Value.	Duty.
Free list	$2,050,826.75		$13,506,230.23	
Cottons	2,768,341.11	$3,601,784.93	7,534,088.70	$7,447,394.70
Flax and hemp	383,946.90	386,656.35	674,029.52	671,590.87
Wools	364,390.25	399,920.52	1,613,186.22	1,986,020.61
Silks	27,896.50	20,573.80	394,691.60	378,614.57
Mixed	27,097.75	22,593.54	394,889.86	410,419.80
Nutritious substances	57,032.00	53,876.79	4,893,706.49	3,789,270.57
Stone and clay	1,088.50	489.88	81,815.68	41,244.81
Glassware and porcelain	16,225.75	28,677.01	607,727.18	686,884.84
Gold, silver, and platinum	687.00	373.21	320,843.60	27,967.36
Iron and steel	337,595.42	372,990.40	1,510,129.91	1,259,480.12
Copper and its alloys	66,857.00	50,563.69	593,166.91	324,225.37
Tin, lead, and zinc	10,843.34	4,340.09	75,968.92	39,289.76
Fancy notions	24,582.35	11,566.99	658,853.68	505,497.81
Machinery and implement s	3,461.00	1,144.58	539,582.35	128,205.84
Vehicles, etc	415.00	147.41	213,796.20	116,206.57
Arms, powder, and ammunition	7,034.00	2,243.99	280,453.04	172,830.78
Wood and its manufactures	7,124.90	4,372.94	473,684.25	368,523.72
Paper, cardboard, etc	32,528.05	27,751.55	1,352,143.12	1,161,250.81
Furriers' supplies	10,443.30	5,585.03	414,109.54	290,211.92
Medicinal drugs and chemical products	88,545.01	52,116.35	1,697,830.38	997,449.42
Sundries	51,018.42	36,101.70	2,193,966.94	1,675,382.70
Total	6,337,980.30	5,083,870.75	40,024,894.32	22,477,962.95

This table includes only customs tariff duties. Merchandise and effects free under special concessions or per specific instructions from the treasury department have been taken into consideration upon the basis of customs dues assigned thereto in the tariff. Effects entered in the free zone are also considered with the duties under the regular tariff.

This table does not include the importations through the Altata custom-house, as the returns therefrom have not yet been received.

THOS. RYAN,
Minister.

UNITED STATES LEGATION,
Mexico, March 6, 1891.

BANKS IN HONDURAS.

REPORT BY CONSUL PETERSON, OF TEGUCIGALPA.

I have to report that on January 5, 1891, the Government of Honduras issued a charter to Mr. B. Cecil, now resident in this Republic, though a citizen of the United States, to establish a bank in the city of San Pedro Sula, in the department of Santa Barbara. The charter provides that the bank shall be known as the "Bank of San Pedro." The capital subscribed is 25,000 pesos (with the privilege of increasing to 100,000), divided into shares of 500 pesos each, to be paid in one single payment.

The bank is permitted "to issue and put into circulation bank notes, payable at sight, up to 150 per cent. of the sum subscribed."

The stock will be held principally by American citizens. It is proposed to establish correspondents in New York, San Francisco, and New Orleans.

The establishment of this bank in San Pedro Sula will be of great advantage to the business interests of the north coast of Honduras, which is the fruit-growing section of the country.

San Pedro Sula is a thriving town, 38 miles south of Puerto Cortez, and the present terminus of the line of railroad projected from Puerto Cortez to the Bay of Fonseca, on the south coast of Honduras.

This new bank, while not being in any sense a branch, will work in connection with the bank already established in Tegucigalpa.

The Bank of Honduras, in Tegucigalpa, was organized October 1, 1889, by the consolidation of the two banks which had been organized some few months previous, viz, the National Bank of Honduras and the Bank of Central America, with a paid-up capital of 400,000 pesos and an authorized capital of 1,000,000 pesos. Its president is Cypriano Velasquez and its manager Carlos Alvarado, the present minister of war of this Republic.

At a meeting of the stockholders of the bank on January 1, 1891, the paid-up capital was increased 200,000 pesos, so that hereafter the working capital of the bank will be 600,000 pesos.

At the same meeting of the stockholders mentioned above an annual dividend of 17¾ per cent. was declared upon the stock then paid up (400,000 pesos), and a reserve of 2 per cent. of the capital was put aside, making a total profit of 19¾ per cent. per annum upon the investment.

About 25,000 pesos of the stock of this bank are held by citizens of the United States.

Deposits in this bank are nominal, so that the profits are derived from the capital almost solely.

This bank has already established connections in New York, San Francisco, and New Orleans and is perfecting additional arrangements for convenient and rapid business relations with the United States.

The Government of Honduras is the best customer this bank has, though it does a general banking business and is extensively patronized by the mining companies and business men generally.

The capital (Tegucigalpa) is the center of all the financial operations of the Government, no employé or officer being allowed to pay himself or his subordinates out of funds which come into his hands by reason of his office; so this bank enjoys advantages on that account and derives profit through that source.

JAMES J. PETERSON,
Consul.

UNITED STATES CONSULATE,
Tegucigalpa, January 14, 1891.
No. 128——6.

PUBLIC IMPROVEMENTS IN HONDURAS.

REPORT BY CONSUL PETERSON, OF TEGUCIGALPA.

RAILWAYS.

Concession.—A concession has just been granted by the Government of Honduras to a French company, at the head of which is Mr. Gaubert, Honduras consul in Paris, to construct and operate a railroad from Tegucigalpa, the capital of Honduras, to San Lorenzo, on the Bay of Fonseca, a distance of about 90 miles. The principal terms of the concession are that the said company shall commence the survey of the road within 3 months from the date of the concession, commence the actual construction of the road within 6 months, and complete the road within 2 years from the date of the concession. The Government, on its part, guaranties to the company 6 per cent. per annum upon the capital actually and necessarily invested, said guaranty not to exceed the sum of 200,000 pesos per annum. The company is composed entirely of Frenchmen. It is confidently expected that this road will be built, which will give a much-needed outlet to the Pacific coast from this capital and from the mines and other interests on the Pacific slope.

Interoceanic line.—I am informed by the president, Mr. Bogran, that arrangements have been completed with the English company which owns the projected line of railroad from Puerto Cortez to Amapala, called the Interoceanic line, to repair that portion already in operation from Puerto Cortez to San Pedro Sula, and to complete it as far as Portrerillas, some 30 miles further into the interior. This will make a distance of about 70 miles from the north coast (Puerto Cortez), which will constitute the first section. After the completion of this section, it is proposed to raise a loan for the completion of another section, and so on until the entire line is finished. Mr. Bogran informs me that the engineers are already on the line, and he is confident of the success of this great improvement, which has heretofore met with so many and so serious embarrassments.

WATERWORKS.

Another public improvement of importance and benefit to the Republic is the building of waterworks for the capital. The work is being done by the Government, and the contractors are W. H. Cole and George Gibson, two American citizens. The contract price is 160,000 pesos, which includes the erection of six public fountains in this city. The water is brought from a distance of 45,000 feet and from an elevation of 5,000 feet above sea level and 1,800 feet above the city. The contract includes the laying of 65,000 feet of mains and pipes. The source of the water is the River Jutiape, and there are two reservoirs of 225,000 gallons each. The mains and piping vary from 12 to 6 inches in diameter. It is purchased by the contractors in New York. The work is to be completed by July 1, 1891.

BEER-BREWING CONCESSION.

A concession has been granted to Louis Bier, of New Orleans, giving him the exclusive right for 6 years to manufacture beer in the Republic of Honduras. There is at present no beer made in Honduras, and during the year 1889 there was consumed in this country 60,000 pesos' worth of imported beer. There are no statistics of 1890 extant yet. Mr. Bier has commenced work in getting his building ready and will shortly commence the production of beer. He has associated with himself sufficient capital, American and native, to make his project a success.

WAGON WAYS.

Another matter of importance is the building of wagon roads in this Republic. There is at present a wagon road from La Brea, the port in the Bay of Fonseca on the south, through Tegucigalpa and Comayagua, and is rapidly approaching Santa Barbara. The work will be pushed through as rapidly as possible to San Pedro Sula, when there will be a fair wagon road across the entire country. There are a number of good bridges on this road already constructed and others in process of construction.

TRADE WITH THE UNITED STATES.

The present need of Honduras is internal communication, and the pressing need of commercial relations between Honduras and the United States is the opening of these means of transportation through to the north coast. When wagon roads and railroads give to this Republic an outlet to Puerto Cortez, Truxillo, and other portions of the north coast, an increase of trade with the United States may be expected to follow as a natural consequence.

The income of this Government does not justify the expenditure of large sums of money in public improvements, but those improvements are gradually coming under the progressive spirit which has for some years actuated the administration of its affairs.

JAMES J. PETERSON,
Consul.

UNITED STATES CONSULATE,
Tegucigalpa, March 7, 1891.

COMMERCE IN CHINA IN 1890.

REPORT BY MINISTER DENBY, OF PEKING.

I have the honor to transmit a few general observations on the trade and commerce of China during the year 1890, abstracted generally from the columns of the North China News.

The passage of the silver bill in the United States created a great flurry in exchange. At some ports business was suspended for a time, and loud were the mutterings of the merchants.

Having bought goods for shipment when silver was low, and being compelled to sell exchange when silver was very high, they preferred to hold their goods until they could realize more on their drafts on London; but silver commenced to decline after a short time, and the anxiety of the merchants meanwhile disappeared.

It seems that cotton and woolen goods have held their own, and importers have done a satisfactory business. To those who had large stocks on hand the rise of silver in the autumn was a great advantage; still, the deliveries of piece goods in 1890 exceeded those in 1889.

Of cotton yarn imported from Bombay and England in 1890 there were 463,463 piculs,* as against 213,823 piculs in 1889, a very considerable increase.

In T cloth there has been a falling off. These cloths seem to be going out of favor with the Chinese.

Metals have mainly held their own, though lead is not up to last year's figures. Nail-rod iron shows an increase.

The McKinley tariff has been attacked here, as elsewhere in countries where England dominates; yet it is claimed by them, with some inconsistency, that this tariff has distinctly benefited the English trade in woolens in China. It is claimed, also, that the export trade of Germany has been injured by its protective system to the corresponding benefit of England.

The rise in silver has had a depressing effect on the export trade.

The tea trade has paid fair returns to shippers. The trade in black tea has been unusually good, but the diminution in the quantity of tea exported has been, in later years, enormous. The North China News shows the diminution by the following table:

Articles.	1890.	1885.
	Pounds.	*Pounds.*
Black tea	26,336,994	65,940,685
Green tea	4,559,527	9,310,574
Total	30,896,521	75,251,259

The American market in tea has been uncertain, but is now reassuring.

Silks bought after the rise in silver did not meet a corresponding market in Europe. The tael price did not change with the rise, and the settlements for the season are less even than they were in 1887.

The North China News states that the Shanghai stock market has been disastrously affected by the rise in silver. Stocks of all kinds have fallen in value, with the exception of the shares of the Hongkong and Shanghai Banking Corporation. At the end of December, 1889, the shares of this bank were at a premium of 186 per cent., while at the same period in 1890 the premium was 255½ per cent. This is accounted for by the fact that the bank is on a silver basis and gained immensely by a rise in exchange.

* 1 picul = 133⅓ pounds.

In Shanghai, on the 27th day of December, 1889, the rate for bank bills on demand was 4*s.* 4½*d.*, and on the 26th of December, 1890, the rate was 4*s.* 9*d.*

Altogether, it is conceded that the year has not been a bad one for business.

CHARLES DENBY.
Minister.

UNITED STATES LEGATION,
Peking, January 29, 1891.

DEPRECIATION OF LAND IN RUSSIA.

REPORT BY CONSUL-GENERAL CRAWFORD, OF ST. PETERSBURG.

The department of agriculture and rural industry has just published a report relative to the fluctuations in the prices of land in Russia in Europe during the period from 1860 to 1889. The information obtained and arranged by the department shows, first of all, the fact that from 1860 to 1883 the price of land had progressively increased over all the Empire, but this progress was particularly rapid in the northern and southwestern provinces, as well as in the Baltic provinces.

This proves the falsity of the statements which are heard even up to today touching the subject of the terrible blow given to agriculture in Russia by the liberation of the serfs. It is clear that the reform of the 19th of February, on the contrary, gave a strong incentive to the development of rural economy in Russia. The loss of gratuitous hand labor has been largely compensated by the increase in the output obtained from princely estates, and the considerable increase of revenue has justly been the cause of the rise in the price of land, whose value has more than doubled in the course of 23 years.

Since 1883 the aspect has somewhat changed, although in certain regions of the Empire the price of land still continues to increase, whereas in others it is gradually decreasing.

The provinces of the south of Russia, called the "steppes," are the first on the list to show an increase in the price of land. The price of an acre of land has been $10.15 for the 6 years ending 1889. Next come the northwestern and southwestern provinces, the industrial provinces, and those of the center of Russia. Everywhere else, especially in the north and along the littoral of the Baltic, the prices of land have fallen, thus confirming the information previously obtained by the agricultural department touching the cost of production and the sale of cereals. Effectively, in this respect, during the last years the southern, southwestern, and northwestern provinces have eluded a crisis which has affected the other provinces of the Empire, although, on an average, the depreciation of land in the north, in the provinces of the east and southeast, as well as in the provinces of the Volga and the Baltic, has not attained the degree of an imminent catastrophe; never-

theless, the space included in the retrograding movement shows the difficulties which these agricultural regions are suffering since the year 1883. The price of land is rapidly falling, and it is impossible to foresee when it will stop. The department is advised that this result should not be overlooked, for, although this decrease is proceeding with slowness, it is nevertheless of serious importance for the future of Russia.

J. M. CRAWFORD,
Consul-General.

UNITED STATES CONSULATE-GENERAL,
St. Petersburg, March 17, 1891.

COTTON-TIE MANUFACTURE IN ENGLAND.

REPORT BY CONSUL BURGESS, OF TUNSTALL.

Among the many English industries affected directly to a greater or less extent by the operation of the new tariff laws, perhaps none has been so adversely acted upon as that of the manufacture of cotton ties; and, among those interested in the manufacture of this particular article, none have been so deeply affected as the forge at the little village of Wheelock, within this consular district. The Wheelock Iron and Salt Company (limited), commonly known as the Wheelock Forge, is the only works in England that has devoted its entire energy to the manufacture of the one article—the widely known "Wheelock ties." This entire plant was built, and the machinery made, especially for this one particular branch of the iron industry. It was therefore impossible, without very great additional outlay of capital, to so alter and rearrange the plant as to make it of use for any other line of manufacture. Thus, when the late legislation was accomplished which proved so adverse to the cotton-tie interests of Great Britain, this plant was at once so deeply affected as to cause an entire suspension of operations.

At the kind suggestion and invitation of Mr. John Rigby, the managing director of the forge, I have had the pleasure of an investigation of the present status of affairs. The magnitude of the business done by this particular forge and its importance in the cotton-tie industry of this country will at once be recognized in the fact that, out of an average annual exportation of 25,000 tons, 15,000 tons were produced at this village of Wheelock. The ties are cut in lengths of 11 feet each out of No. 18 gauge iron 1 inch wide. Thirty of these ties constitute a bundle, 44 of which bundles weigh just 1 ton.

The new tariff act imposes a specific duty of 1.1 cents per pound on the band iron and an additional two-tenths of a cent per pound on band iron wholly manufactured into ties, as against an ad valorem rate of 35 per cent. under the old law. Therefore, 1 ton of such ties valued here at an average of £7, or $34.06, being dutiable at the rate of 35 per cent., would pay a duty of $11.92, while under the new law at the specific rate of 1.3 cents per pound the same ton would have to pay a duty of $29.12, or an increase of $17.20

per ton. This, at the present price of cotton ties in the United States, and there being no other market except the United States for their product, has compelled the company to close its operations.

With a plant valued at $250,000 on their hands, utterly unfit for the manufacture of any other commodity, the blow has fallen very heavily upon the shareholders. There was some talk at first of investing the additional capital required and of rearranging the plant for the manufacture of some other line of iron product. This idea, however, has been abandoned, and the directors have decided to wait and see whether the next Congress, or at least the next administration, will not so modify the tariff laws as to permit of them resuming their operations as heretofore. The cessation of operations has, as a matter of course, grievously affected the little village of Wheelock; nearly the entire village was dependent, either directly or indirectly, on this one industry. Englishmen are not like men of some other nations; they do not like to change either their abode or their particular line of work, and when it becomes a matter of necessity, as in this case, they are slow to make the change.

The weekly consumption of coal at this forge was from 600 to 700 tons of a peculiar quality mined in the neighborhood, yet almost entirely unfit for any other line of local manufacture or consumption. The question, "What shall we do with this large part of our product?" has become one of serious importance to the colliery proprietor. Being of a cheap grade and only fit for a certain line of manufacture, the question of freights has practically almost killed its sale.

In tendering this short report, I beg permission to thank Mr. Rigby for the kindness extended me and for the frankness and freeness with which he answered all my inquiries.

WILLIAM BURGESS,
Consul.

UNITED STATES CONSULATE,
Tunstall, March 13, 1891.

TRADE AT NUEVO LAREDO.

REPORT BY CONSUL-GENERAL SUTTON.

IMPORTS.

The imports into Mexico at this port for the years 1888 and 1889 have been obtained after much labor. One great trouble is that the values of these imports are in most cases very low, in many not even half the well-known value. As all pay specific duties, it is not necessary to the collection of the revenues to have the correct values given.

I am unable to compare the imports here with those at other ports, as no data have been lately published by the Mexican Government as to importations.

Free goods.—It will be noted that the "free goods" make nearly one-half of the total imports for the 2 years.

In Table 1 I have stated so much of the various items of free goods as our data would admit.

In the first year live animals amounted (in 10 months) to $290,846. The law imposing duties on live animals took effect in November, 1889, and hence the lessened imports for the following year go in under "dutiable goods."

The imports of coal are from the Indian Territory and Laredo, Tex. The proportion is about two parts of the Territory, to one of Laredo, coal.

The coaches and cars were not only for existing, but also for new, lines, as the Interoceanic, Southern, etc., and were all made in the United States.

As I have previously reported, small imports have been made of American steel rails for the Monterey & Mexican Gulf Railway.

Locomotives, lumber, and ties are all from the United States, as is nearly all the agricultural and mining machinery.

We have a growing trade with Mexico in powder, dynamite, etc., for mining, which is larger at other ports than here, because here all freight must be reloaded on to narrow-gauge cars, and this is expensive and risky with this class of goods.

Dutiable goods.—Under this head the most important item is ginned cotton, all of which comes from the United States, and mostly from Texas. This item ought to increase to $1,500,000 or $2,000,000 in 1 or 2 years.

The imports of beer, almost entirely from the United States, are not large, but increasing steadily, and the same may be said of wheat flour, lard, musical instruments, sewing machines, and furniture. Except for the very high duties, the last named could be greatly increased.

The mineral oils are mostly crude oils, imported at a low rate of duty to be refined and sold in the country.

The tobacco is all from the United States.

EXPORTS.

The exports of silver ore show an increase of nearly $1,000,000, and this, too, in spite of the silver-lead ore ruling of our Treasury Department.

The falling off in coined and bullion silver is due to local causes, such as express traffic arrangements. The Wells-Fargo Express has the greater portion of all this traffic and carries most of it out at El Paso and Eagle Pass, to connect with their own lines to New York and San Francisco.

The copper and lead are mostly in bars and sent through the United States in bond to Europe.

More than half the total Mexican export of ixtle and of goat and kid skins goes out here, and the totals of both show a slight decrease in the second year.

I call attention to the exports of deer and hog (javali) skins, which amount to something like $100,000 and $27,000 per annum, respectively, from all Mexican ports, and substantially all sent to the United States.

There was no wool exported through this port during the last year and only $12,000 in the first year. Our import duties and the growing home market have steadily decreased this article of export, which formerly amounted to over $200,000 and has now fallen to about $25,000.

The exports of live animals have recently averaged over $500,000 per annum, substantially all to the United States. For the fiscal year ended June 30, 1890, the total exports were:

Animals.	Number.	Value.
Horses and mares	18,086	$194,822
Sheep and goats	52,836	68,676
Mules	6,901	116,394
Neat cattle	13,950	112,617
Other		7,709
Total		500,218

Of these, $3,960 went to Great Britain, $2,500 to Spain, and the balance all to the United States from points along this border.

The exports held at or about this rate until October 6, 1890, when our new tariff bill took effect, and since that time not a single Mexican horse, mare, mule, or cow has been invoiced at this office, and the same is more or less true at the other offices along this border.

The $26,333 in the exports of this place during the last calendar year comprise shipments up to October 6, 1890.

The increase of some $500,000 in the last, over the former, year shows a steady growth in the export trade of Mexico, and one which is likely to hold for the present year at least.

Table 1 gives the imports as all from the United States, but actually a considerable portion are European goods brought through the United States in bond.

It has been found impossible to exactly state the amount of these European goods, because proper data are not exacted. Bonded goods in transit for immediate exportation require no invoice in the United States. The European invoices, taken out before a Mexican consul there and sent to the consignees in this city, are often disregarded, and new ones, more carefully prepared, are taken out before the Mexican consul in Laredo, Tex. This is even more generally done as regards our own goods sent from Kansas City, St. Louis, Chicago, New York, etc. All the goods invoiced by the Mexican consul in Laredo, Tex., and all goods imported at Nuevo Laredo, Mexico, are stated as coming from the United States, but the data do not show country of origin. Our own law is so defective that our export data at Laredo, Tex., as to domestic products are almost valueless. The values stated are so low as to be very misleading. All around it has been difficult to more than approximate the division of the imports given in Table 1 into European and United States products. It is perhaps appropriate to state that this is the entry port of more European goods than any other in Mexico,

except Vera Cruz, and the fees for landing certificates in this office are greater than in any other office in our whole foreign service.

FOREIGN IMPORTS IN BOND.

To show this bonded traffic I give Table 3, which shows the declared invoice values of these goods for the half year ended December 31, 1889, and for the year ended December 31, 1890, on the landing certificates presented during those periods. As, however, a certificate is often to cover goods crossed 15 to 30 days previously, the totals would not agree with those of exports from Laredo, Tex., or of imports into Nuevo Laredo, Mexico. They serve, however, to give an idea of the value and class of this traffic, in so many lines of which our own goods might profitably compete were it not for the exceptional facilities given this trade. For instance, the charges for inspection, revision, etc., have been so cut down in the United States that, by good estimates, it is done at an actual loss to our own revenues. When the bonded laws and regulations were first established, the intent was to enable our merchants to import and hold in the United States in bond large quantities of these goods, so as to sell in bond to foreign countries, and thus enable them to control a fair share of the foreign goods traffic. Nowadays, however, the greater portion comes through under immediate transportation bonds and affords very little, if any, benefit to our merchants. On the contrary, the Mexican merchant can order by cable and get these goods across our territory under more favorable conditions, in some respects at least, than he can American goods. I have been informed, and presume it to be true, that certain goods are carried from Liverpool or Hamburg to the interior of Mexico for less than similar goods are carried from New York or Chicago, and for about the same rates that are charged from St. Louis and Kansas City.

It is right and proper to give the trade in these foreign goods across our country a fair chance, but it seems to me that under the present conditions they are already favored at the expense of our own goods, which are thus shut out from their natural increased sale here by these discriminations.

Notwithstanding the increased restrictions to the commerce between the two countries imposed by recent legislation of both countries, the volume of trade is steadily increasing. The Mexican import duty of $20 on a stallion and $40 on a gelding does not burden our sellers so much as to stop the traffic in the high-grade horses which we send to Mexico; but the United States import duty of $30 on horses and mares is prohibitory on the low-grade stock hitherto imported from Mexico, being an average of 250 to 300 per cent. on the value.

Our trade in live hogs is of recent date and was growing very rapidly. The imposition of the duty has not stopped, but has hindered, its greater extension. Mexico could easily take $500,000 worth of live hogs at rates which would be profitable to producers, carriers, and dealers, as well as a positive cheapening of food to the people of Mexico. Besides the duty of $2.50 per

head, an inspection tax was imposed at certain points. This, I understand, was soon removed.

A review of our trade with Mexico shows more clearly the urgent need of some reciprocal and mutually beneficial treaty regulations. There are certain articles of each country which the other urgently needs, and which can be made free of import duty, or with reduced duty in each, to the great benefit of producers, consumers, and carriers, and that, too, without loss to the revenues of either Government.

TABLE I.—*Imports at Nuevo Laredo from the United States.*

Articles.	Year ended December 31—	
	1889.	1890.
Free:		
Live animals (except geldings)	$290,846	
Agricultural implements	33,071	$32,750
Quicksilver	15,845	22,907
Lime and cement	41,742	36,122
Piping, iron and lead	25,514	58,840
Coal, stone	186,597	409,617
Coaches, etc., for railways	513,318	582,689
Sacks (common) of jute, etc	9,986	23,286
Steel rails	302,090	322,098
Locomotives and parts	369,592	304,040
Lumber	153,042	156,354
Ties, wood	205,120	53,363
Agricultural, mining, etc., machinery	251,510	321,714
Money, Mexican silver	108,798	247,227
Powder, fuses, etc., for mines	73,526	100,070
Paper pulp	12,322	13,152
Frogs, fish plates, spikes, etc., for railways	109,725	96,278
Soda, caustic	18,672	26,487
All other articles	120,087	420,224
Total	2,841,403	3,227,218
Dutiable:		
Cotton—		
Ginned	672,014	975,928
Manufactured	196,709	377,666
Linen and hemp	15,650	28,373
Wool	55,602	53,261
Silk	9,244	14,628
Silk and mixtures	8,878	4,750
Brandy	18,400	24,122
Beer	42,275	62,105
Cocoa	15,539	28,247
Coffee	21,968	30,919
Sugar	20,948	11,250
Wheat flour	25,885	29,939
Maize	5,975	58,982
Lard	8,810	11,676
Wine	46,875	44,731
Crystal and glass	23,862	29,285
Earthenware and porcelain	24,993	19,014
Iron, steel, tin, and their manufactures	41,014	56,595
Tools for artisans	27,112	25,990
Musical instruments	15,964	18,338
Sewing machines	44,662	53,401
Furniture, wood	34,319	59,686

TABLE 1.—*Imports at Nuevo Laredo from the United States*—Continued.

Articles.	Year ended December 31—	
	1889.	1890.
Dutiable—Continued.		
Oils, mineral	$128,177	$195,789
Colors	9,043	17,571
Geldings	7,244	11,864
Fats, animal	130,758	77,589
Soaps	8,316	8,414
Perfumery	4,303	2,389
Tobacco, leaf	76,096	74,528
Candles, stearine	11,440	35,082
Horses (except geldings)	520	6,490
Hogs	8,360	34,590
Neat cattle	11,712	122,580
Mules	3,280	160
Sheep	300	9,741
All other articles	724,628	1,337,413
Total	2,500,875	3,679,486
Grand total	5,342,378	6,906,709

TABLE 2.—*Exports from Nuevo Laredo to the United States.*

Articles.	Year ended December 31—		Total.
	1889.	1890.	
Silver ore	$995,832	$1,970,592	$2,966,424
Mexican silver and bullion	992,677	558,557	1,551,234
Gold bullion	.....	17,660	17,660
Copper	4,988	74,624	79,612
Lead	137	42,731	42,868
Ixtle	385,029	362,476	747,505
Goat and kid skins	596,026	550,423	1,146,449
Deer skins	8,683	8,096	16,779
Hog skins	10,296	8,242	18,538
Hides	58,615	35,708	94,323
Horse hair	27,893	35,359	63,252
Coffee	1,661	4,442	6,103
Wool	12,194	.....	12,194
Crude sugar	3,763	2,904	6,667
Horses and mares	31,656	26,333	57,989
Mules	11,019	7,366	18,385
Neat cattle	936	12	948
Red pepper	21,035	12,044	33,079
Beans	.....	8,955	8,955
Nose bags	2,331	1,157	3,488
Earthenware	909	1,211	2,120
Vegetables	985	4,906	5,891
Lime	1,969	476	2,445
Mescal	233	310	543
Chocolate	561	712	1,273
Oranges	1,548	2,573	4,121
Miscellaneous	28,629	39,218	67,847
Total	3,199,605	3,777,087	6,976,692

TABLE 3.—*Bonded goods imported at Nuevo Laredo.*

Articles.	6 months ended Dec. 31, 1889.	Year ended Dec. 31, 1890.
Caustic soda	$6,007	$24,253
Drugs and chemicals	11,523	34,396
Dry goods (not otherwise stated)	174,511	360,758
Earthenware, glassware, etc	8,132	38,400
Fancy articles	3,888	32,130
Food products	17,122	47,764
Furniture	13,960	28,977
Fur skins	.....	13,556
Iron and steel and manufactures thereof	64,650	167,704
Jute bags	.....	5,452
Lime and cement	6,934	11,852
Machinery	35,177	71,179
Marble	.....	3,069
Miscellaneous	5,780	26,628
Musical instruments	2,499	10,478
Paper pulp and manufactures thereof	10,950	50,321
Perfumery	2,795	3,943
Quicksilver	.....	29,331
Railway material	23,762	123,487
Stearine and manufactures thereof	8,561	31,460
Steel rails	295,735	308,440
Tin cans (containing crude oil)	2,958	3,145
Tin plate	3,445	8,650
Wines and liquors:		
United States	26,707	71,442
European	42,099	75,768
Total	767,204	1,582,583

WARNER P. SUTTON,
Consul-General.

UNITED STATES CONSULATE-GENERAL,
Nuevo Laredo, March 25, 1891.

PRODUCTION OF IRON IN GERMANY.

REPORT BY CONSUL PARTELLO, OF DUSSELDORF.

Table showing the production of iron and iron castings in Germany during the month of December, 1890, with a comparative statement for the same period of 1889.

Groups or works.	Number.	Production.
Puddle, pig, and spiegel iron.		*Tons.*
Northwest German	37	64,068
East German	11	23,682
Middle German	1	.....
South German	8	16,695
North German	1	690
Southwest German	8	41,251
Total	66	146,386
November, 1890	65	150,431
December, 1889	65	184,379

Table showing the production of iron and iron castings in Germany, etc.—Continued.

Groups or works.	Number.	Production.
		Tons.
Bessemer pig-iron.		
Northwest German	6	29,193
East German	1	90
Middle German	1	.....
South German	1	1,470
Total	9	30,753
November, 1890	10	33,804
December, 1889	10	33,788
Thomas pig-iron.		
Northwest German	12	52,242
East German	3	12,892
North German	1	10,409
South German	7	32,661
Southwest German	4	29,817
Total	27	138,021
November, 1890	27	136,438
December, 1889	22	124,386
First quality iron castings.		
Northwest German	10	16,198
East German	7	2,530
Middle German	1	.....
North German	2	2,541
South German	6	15,354
Southwest German	4	10,777
Total	30	47,400
November, 1890	28	40,711
December, 1889	27	48,970

RECAPITULATION.

	Tons.
Puddle, pig, and spiegel iron	146,386
Bessemer pig-iron	30,753
Thomas pig-iron	138,021
First quality iron castings	47,400
Total	362,560
December, 1889	391,523
November, 1890	361,384
January 1 to December 31, 1890	4,563,025
January 1 to December 31, 1889	4,387,504

NOTE.—The groups or works are composed of the following districts: Northwest German, Westphalia and Rhineland (not including Saar district); East German, Silesia; Middle German, Saxony and Thuringia; South German, Bavaria, Würtemburg, Luxemburg, Hesse-Nassau, and Alsace; North German, province of Saxony, Brandenburg, and Hanover; Southwest German, Saar district and Lorraine.

D. J. PARTELLO,
Consul.

UNITED STATES CONSULATE,
Dusseldorf, February 28, 1891.

HOW TO PLACE LOOMS.

REPORT BY CONSULAR AGENT NEUER, OF GERA.

The manufacture of woolen dress goods forming the leading industry in this district, and having attained a high degree of perfection, it appeared to me in the interest of our weaving mills to find out, and report upon, some facts in the field of technical knowledge.

To place an ordinary loom is of importance if due consideration is given to light, facilitation of work, and utility generally. Much greater stress has to be laid upon these factors in connection with Jacquard looms, inasmuch as they absorb more light, and, owing to their complicated mechanism, have to be treated with greater care than other looms.

All looms, without exception, must be practically placed if they are to answer their purpose. Special care has to be taken that they are put up in such a manner as not to unnecessarily deprive themselves or the remaining looms of light; otherwise, the weaver will not be able to avoid imperfections, and the necessary and important control of the goods is rendered difficult. Wherever it is possible, there should be assigned a window to each loom. Broad looms for corresponding articles should stand in the immediate proximity of the window, so that light is thrown directly on the texture. The first looms are always to be set up along the walls and windows; the subsequent ones of the second row, according to the more or less projecting lathes, at a distance equal to about a third or half of a loom's length forward or backward of the first row.

Were the looms—the lathes of which often extend up to 50 centimetres beyond the main body—placed parallel opposite each other, an interspace of about 1 metre between the two rows would be the consequence. The lathes, however, would be so near each other as to render a passage between the looms impossible and the addition of 60 centimetres of space indispensable. Thus it requires in all a space of about 1.6 metres between each row, more than half of which would be superfluous, though the distance from one swing frame to the other amounted to only 60 centimetres.

By means of the former and proper arrangement the lathes are from 70 to 80 centimetres in length and about 60 centimetres in breadth apart, and, while thus a more commodious passage is procured, space will be saved.

The principal passage through the loomery ought to occupy a space of from 1 to 1.5 metres in width.

With Jacquard looms the unhindered affixture of the sets of cards must be paid particular attention to. There is, however, an excellent expedient, if light or another advantage should require it. In accordance therewith, the Jacquard machine is reversed on the loom, namely, it is so placed that the operating cards and the relative pattern appear on the right, instead of the usual left, side of the beam. That the wires are inverted thereby

and the twill and figures are given a contrary direction is immaterial, inasmuch as the proper qualification is restored by correspondingly turning the texture.

If looms already in use undergo a change of place, or if such a loom has fuller light on the side of the warp beam than on the table of the cloth, it appears simple and proper to turn the loom to overcome this disadvantage. Should this procedure prove impossible, however, on account of cards, then machine and harness are removed on the loom to the lighter place; the sley is cut off, the location of the beams for warp and cloth is changed, and the sley is stitched again to the other side. Between the lengthwise direction of each loom there ought to be as much vacant space as to permit a safe passage and an unhindered performance of the requisite work.

Hand looms afford an advantage, in so far as space is concerned, by admitting the application of double looms, the warp beams of which are put in a common receptacle. In this case both operators face each other while working, and the two looms consist only of one frame, in the longitudinal midst of which the necessary beams are placed.

Only a strong loom should be used for a heavy article, and a lighter loom for a less heavy article, or, in other words, the tools must be adapted to the goods produced therewith. To apply heavy looms for light articles would be impractical, in so far as they do not only diminish the light, but are much more expensive and work at too slow and unwieldy a pace. To produce a heavy article by means of a light loom is an impossibility.

As a rule, the whole of a loom should not cover less than 8, nor more than 10, square metres. The breadth and length of hand looms adapt themselves to the relative article, and the requisite space is seldom surpassed in this case. Stuffs of ordinary width require, including allowance for passage, a breadth of from 2.1 to 2.2 metres for each loom.

The height of an ordinary loom, together with attachments, may amount to from 1.65 to 2 metres, according to the height of the loomery. The aggregate height of a Jacquard loom, inclusive of machine, must not be below 2.6 metres for narrow, and 3.2 metres for broad, articles. The sets of cards forming a part of Jacquard looms ought to be so constructed as to permit their exact motion from the cylinder, a successive advance, and sufficient space for the following cards. The wires should be accurately and regularly pressed in the patterns, and the wooden or iron rails must be exactly adapted to the cards. In case of a forward and backward motion of the latter, their correct movement is especially needed, and no trouble should be spared to attain this object.

CHARLES NEUER,
Consular Agent.

UNITED STATES CONSULAR AGENCY,
Gera, March 16, 1891.

SHEEP AND WOOL IN ASIATIC TURKEY.

*REPORT BY CONSUL-GENERAL SWEENEY, OF CONSTANTINOPLE.**

SHEEP DISTRICTS.

The whole of Asiatic Turkey may be considered as a wool-growing country, because every province of Asia Minor produces this article to a great extent. It is interesting to note that the quantity produced in every district seems to depend largely on the habits, character, and civilization of the inhabitants of the respective provinces. Thus the greatest exportation of wool in Turkey in Asia, according to the official statistics, is made from Mesopotamia, where the inhabitants are all nomads and have no other occupation than taking care of very numerous flocks of sheep and migrating during the whole year from one region to another, according to the climate and foraging conditions of the country.

FLOCKS.

Flocks of sheep are not at all as numerous in western and northern Asia Minor as in the valleys of the Euphrates and Tigris. This is, of course, due to the fact that in those parts of Anatolia the inhabitants are much more occupied in cultivating the country than traveling all the year round with their tents and flocks of sheep. A relatively higher degree of civilization and less nomad life doubtlessly prevail among the people of Anatolia than those of the desert regions of Mesopotamia.

WOOL CLASSIFICATION.

Another important point which is generally worth noticing in Asia Minor is that the quality of the wool in each district seems to be influenced by the climatic and topographical conditions of the country. Thus the wool of the flocks of sheep of the plains of Mesopotamia, and which belong to the Arabs (these people inhabit the whole of the valley of the southern Tigris and are divided into *achirets*, or tribes, to whom belong the flocks of sheep), and which pass the winter outside, owing to the mild climate of the country, is of much finer and cleaner quality than the wool of the flocks of the north, viz, of the province of Koordistan, where the severe winter obliges shepherds to keep their sheep under peculiar roofs, which are called *aghel* in Turkish, and are always inadequate to cover the numerous animals, which very often lie in dirt, and thus the wool is deteriorated to a great extent.

WOOL-WASHING.

If we continue our examination by comparing the different samples of wool, we find that it is cleaner wherever there are several small rivers which the animals could cross. Wool is free from dust when the flocks live in

* Prepared from statistics supplied by Mr. C. S. Godbenkian, who has large wool interests in the interior of Asiatic Turkey, and to whom I am indebted for the information given.

mountainous regions. There is, for example, a far greater amount of dust in the goats' wool coming from the plains lying east of Konieh, or Iconium, than in that coming from Angora and other regions which are mountainous.

BREEDS OF SHEEP.

With regard to the different families of sheep in Asia Minor, it must be pointed out that there are actually very few differences among the races of various districts, and these differences can be divided principally into two distinct classes. First, the flocks of Anatolia (excluding Mesopotamia) belong, generally, to the family known in Asia Minor as "Caraman." It is indeed difficult to explain why this name has been given to the principal family of sheep in this country. Perhaps it is because the district of Caramania and the fields of Tchoukourova (low land), which are extending to the south, are the places where a great many shepherds meet coming with their flocks from all parts of Anatolia every spring in order to shear the wool. Second, the other principal family is that of Mesopotamia, but the sheep belonging to the same differ essentially according to the different regions, and no general name is given to it. "Karadi" or "Karakash," "Awassi," "Mendelli," "Kerkouk," and "Djaff" are the names given to the different qualities of wool produced in Mesopotamia. The fact is that the flocks in Mesopotamia have been crossed with Persian sheep, of which they maintain the principal element in their blood.

EXPORTS.

It is reported that 35,000 bales are exported yearly from the whole district of Mesopotamia, and the greatest proportion of this quantity goes to the United States.

VILAYET OF ANGORA.*

Sheep and wool.—Comparing the respective figures of the wool clip and the number of sheep in the several districts of the vilayet, or province, for the last 2 years, we notice a marked increase in the numbers of last year. This increase should not be attributed to a gradual increase of the yearly wool production, as, indeed, one might expect, but to the fact that many flocks perished from cold and severe weather during the winter of 1889, there not being sufficient shelter for them, owing to defective precautionary measures and mortality having increased to 20 per cent. more than the average.

Breeds.—All the flocks of the Angora vilayet, about 500 in number, belong to the well-known Caraman breed, which in many respects resembles the crossbreed.

Exports.—Out of the total production of 1,835,547 okes† during 1890, only one-third of the clip of the Angora district and half of the total clip of the districts of Kerchehir and Yoozgat have been forwarded to foreign countries, whilst the remainder, together with the whole production of the

*Comprising the districts of Angora, Kerchehir, and Yoozgat.

†1 oke=2.8 pounds.

district of Cesarea, has been appropriated for local consumption. On the whole, the exports from this vilayet are decreasing, local consumption increasing every year, especially for the manufacture of carpets.

Domestic use.—The quantity of the clip retained for local and domestic manufacture is used in making curtains, canvases, carpets, rugs, covers, stockings, bags, and coarse overcoats.

Washing and shearing.—In this vilayet the wool is never washed on the backs of the sheep, but only after being sheared for the local use, so that it stands about 50 per cent. of the original weight.

As regards exportation, we must state that washing is practiced, comparatively, only on a very small scale, because it does not pay the exporters.

Exports to the United States.—Nearly all the washed wool for export from this country is forwarded to the United States, the proportion in this case being about 60 per cent. of the original weight.

Historical references.—Some 40 or 50 years ago exportation was effected to the same extent as at the present time, with the only difference that the wool was washed and Smyrna was the only market for it, while to-day Angora wool is known everywhere. With regard to local consumption, the wool has been used for many years for the purposes above mentioned.

Clip.—Each male sheep of this vilayet is estimated to give annually 1¾ okes of wool, whilst the females give only 1¼ okes. It is estimated that both males and females exist in equal numbers in the flocks. About 100,000 sheep are sent from this vilayet to Constantinople, Smyrna, and Brusa for consumption, and an equal number are killed for local demand, annually.

Shearing.—The male sheep are sheared in the province from the 15th to the 30th of April and the females only towards the end of May. During the year 1890, besides the 1,835,547 okes, there were also 100,000 okes of wool sheared from the skins, as well as the autumn clip of 350,000 okes.

Table showing the number of sheep and production of wool in the various districts of the vilayet of Angora in 1889 and 1890.

Name of district.	Number of sheep.		Production of wool.	
	1889.	1890.	1889.	1890.
			Okes.	*Okes.*
Angora	472,742	625,340	709,113	938,010
Kerchehir	185,093	184,781	277,639	277,171
Yoozgat	224,377	273,157	336,565	409,735
Cesarea	132,169	140,421	198,253	210,631
Total	1,014,381	1,223,699	1,521,570	1,835,547

VILAYETS OF BASSORAH, BAGDAD, AND MOSUL.*

Sheep and wool.—The statistics of the above three vilayets, or provinces, give a total of 3,600,628 sheep for 1888 and 4,204,851 sheep for 1889,

*Comprising the districts of Bassorah, Amara, Kerbela, Bagdad, Suleymanie, Kerkok, and Mosul.

respectively. It must be observed that these figures, although drawn from official reports, can not be relied upon, because the official reports are based upon the taxes collected for every head of sheep, and, as there are many nomad tribes who escape paying the tax by crossing the frontier into Persia when the collectors of the tax arrive and returning as soon as the officials have left, it is believed that the correct amount for the year 1889 is 6,000,000 sheep for the three vilayets mentioned.

From the aforementioned vilayets 34,800 bales of wool were exported in 1888 and 36,800 bales in 1889, the net weight of each bale ranging from 115 to 120 okes.

Breeds.—The principal family of sheep living in the provinces of Bassorah and Bagdad is that of "Chipal." The main feature of this particular breed is that the wool is rather finer than the other kinds exported from Mesopotamia, the only drawback being the great proportion of colors existing in their wool. Only about 20 per cent. of the flocks contain white sheep, the remainder being black, gray, fawn, and brown. The Chipal breed is very common in these two provinces. Roughly speaking, 80 per cent. of the sheep of this region belong to this breed, the remainder to the Karakash breed, the wool of which is used for the manufacture of carpets, whilst the Chipal wool, known in the United States as "Genuine Bagdad," is used in the manufacture of clothing.

In the province of Mosul the predominant breed of sheep is that of the vilayet of Diarbekir, viz, the Arab breed, the wool of which is known in the United States as "Awasi;" the other breed is the Karakash, already mentioned. The Arab, or Awasi, sheep are met with in the desert of Mesopotamia, whilst the Karakash sheep generally live near the high, mountainous region of the frontier, because, their wool being much heavier than the Awasi sheep, they can not bear the excessive heat of the desert, which they frequent during the winter season.

Variety of wool.—It is interesting to note that the climate influences to a great extent the distribution of the different herds of sheep in this region; for instance, the more we get to the south the wool becomes finer and finer, changing from the Karakash to the Awasi, and from this last to the finest of all, the Chapal or Bagdad wool, which grows in the warmest districts of Asia Minor. In the same way the nearer we approach to the eastern and mountainous regions the wool grows coarser and coarser, so that the sheep found in the mountainous regions of Persia bear a wool which is heavier than the usual Karakash and is distinguished from this wool by the name of "Persian Karakash."

Exports.—Before the opening of the Suez Canal the wool of these districts was sent to Aleppo and thence to Marseilles, which was the principal market for them. Lately, however, there has been a large trade with the United States, whereto large quantities are now being shipped direct from the Persian Gulf.

Exports from these districts are increasing every year, as local consumption is diminishing on account of the importation of European stuffs, which are growing more and more into favor and replace local manufactures.

Twenty-three thousand and seventy-five bales of wool were shipped to London direct from the Persian Gulf in 1889 and 22,400 bales in 1890, and were mostly consumed for the home trade in England, only a small part being shipped to the United States.

Domestic use.—Some 30 or 40 years ago a very great percentage of the wool production of these districts was appropriated for the manufacture of the stuff which the Arabs use in making their "jelleybas" and "hyacks," and which is called "mechlahs." Now the manufacture of these stuffs employs the largest proportion of the wool that remains in the country. Besides the mechlah stuffs, many other woolen articles are manufactured in this province as in others.

Washing.—In the vilayets of Bagdad and Bassorah the sheep, before being sheared, are washed to a certain extent in the rivers, whilst in the vilayet of Mosul the wool is only washed after it is sheared, so that it shows about 75 to 80 per cent. of the original weight.

Wool classification.—The wool of the vilayet of Mosul is generally of the Karakash breed, whilst the Bagdad and Bassorah wool is of the Chipal breed. The proportion of these different qualities in the total exports of 36,800 bales for 1889 is as follows:

Chipal breed, 50 per cent., of which 80 per cent. was colored and 20 per cent. white; Awasi, 30 per cent., of which 80 per cent. was white and 20 per cent. colored; Karakash, 20 per cent., of which 80 per cent. was white and 20 per cent. colored.

Table showing the number of sheep in each vilayet for 1888 and 1889.

Districts.	1888.	1889.
Vilayet of Bagdad.	*Number.*	*Number.*
Bagdad	1,096,033	1,248,141
Hillé	221,816	276,233
Kerbela	102,156	104,957
Imperial farms, excluded from the official lists	299,951	376,100
Mosque of Kadrie, excluded from the official lists	29,131	32,000
Total	1,749,087	2,037,431
Vilayet of Bassorah.		
Bassorah	30,131	33,000
Muntefik	500,934	590,000
Amara	213,816	243,000
Imperial farms, excluded from official lists	81,000	90,000
Total	825,881	956,000
Vilayet of Mosul.		
Mosul	462,660	551,200
Kerkook	329,516	401,150
Suleymanie	170,484	179,070
Imperial farms, excluded from official lists	63,000	120,000
Total	1,025,660	1,211,420

VILAYET OF DIARBEKIR.*

Shearing and washing.—The Arab sheep, before being sheared, are always conducted through rivers, which clean them to a certain extent, and the weight of the wool diminishes about 8 to 9 per cent.

Karakash wool is never washed when on the back of the sheep, but only after shearing, losing in washing from 25 to 35 per cent.

Arab wool very often is washed a second time after being sheared.

Domestic use.—About 150,000 okes are used for the same purposes as in the other vilayets.

Mohair goats and sheep.—According to the official reports, there were in this vilayet in 1889 1,084,000 sheep, 191,000 mohair goats, and 799,000 black-haired goats.

For the year 1890 there were 1,053,000 sheep, 186,000 mohair goats, and 751,000 black-haired goats. About 2,000,000 black goats and sheep are killed in the vilayet every year and sent away for consumption.

Clip.—The total clip of this vilayet is estimated to be about 1,200,000 okes, composed of three distinct qualities, viz: 40 per cent. is the well-known Karadi, or Karakash, quality (the breed of sheep which produce this particular quality is known in Asia Minor under the name of "Kurdestan," and the wool is called "Kurd" wool); 30 per cent. is composed of a particularly fine wool called Arab, or Awasi, wool, the finest production of the province; the remaining 30 per cent. is the poorest of the whole production, which comes from all parts of the province.

Breeds.—The Arab sheep are found to the south of Mardin, where they remain winter and summer, whilst the Karakash sheep emigrate in summer to higher regions towards the north of Mardin, near Diarbekir, because they can not support the excessive heat of the desert, their wool being much heavier than that of the Arab sheep.

To the south of Diarbekir, in the desert region which lies between Aleppo and Mosul, there are about 6,000 tents of nomad tribes which are constantly moving about and whose sheep are not included in any of the official lists. Some of these tribes do not pay any tax at all, and others pay only insignificant sums as compared with the number of sheep they possess, which is estimated at more than 300,000 head, with a wool production of about 350,000 okes. This wool is sold by the tribes as they go on their journey through the different provinces.

VILAYET OF KASTAMOONEE.†

Breeds and wool.—The flocks of sheep in this vilayet also belong to the Caramania breed, there being little difference between the respective clips of the various districts. The wool exported from the district of Kankaree and Boli is the finest of all, being full growth and fine in quality.

Clip.—The total clip may be estimated in round numbers at 600,000 okes for the whole province, of which 100,000 okes only are exported, whilst

*Comprising the districts of Diarbekir, Mardin, and Djizire.

†Comprising the districts of Kastamoonee, Kankaree, Boli, and Sinope.

the remainder is appropriated for local consumption for the same purpose as in the province of Angora.

Shearing and washing.—The above exports include 10,000 okes of wool exported on sheepskins forwarded without being sheared to foreign countries. The wool is exported from this vilayet in its greasy state, and it is only washed for local use so as to lose about half the original weight of the sheared wool.

Mohair goats.—There are in this province about 554,840 mohair goats.

The following statement shows the number of sheep in each district of the vilayet of Kastamoonee in 1890:

Kastamoonee	169,704
Kankaree	122,406
Boli	149,601
Sinope	65,265
Total	506,976

VILAYET OF KONIEH, OR ICONIUM.*

Table shewing the number of sheep and exports of wool in each district of the vilayet of Konieh in 1890.

Districts.	Exports of wool.	Number of sheep.
	Okes.	
Konieh	318,945	495,800
Teké	150,570	171,800
Hamid, or Sparta	70,950	98,400
Bordour	66,375	59,000
Nigdeh	178,600	195,000
Total	785,440	1,020 000

Wool.—The total clip in this province is more than 1,500,000 okes, 785,440 okes of which are exported.

Sheep.—Roughly speaking, the sheep are pretty evenly divided, half being males and half females. A male sheep yields yearly about 2 okes of wool, whilst the female yields not more than 1.5 okes per head. The average yield is about 15 okes per sheep per year.

Domestic use of wool.—Wool is used for the same purposes as in the other provinces.

Wool classification.—There is but very little difference of quality between the wool of the vilayet of Konieh and that of Angora. This last name is given in Europe and America to Konieh wool, and in the United States all wool coming from western Asia Minor passes for Angora wool.

Washing and shearing.—No washing is practiced in this province except for local use and on a very small scale for export. There is a custom in this province of shearing the wool a second time, in August, when the sheep,

*Comprising the districts of Konieh, Teke, Hamid (or Sparta), Bordour, and Nigdeh.

before being sheared, are conducted through small rivers and are washed to a certain extent.

Variety of wool.—The wool coming from the east of Konieh is rather dusty, because the sheep live in plains which extend over a vast region of the country.

Z. T. SWEENEY,
Consul-General.

UNITED STATES CONSULATE-GENERAL,
Constantinople, March 30, 1891.

THE AUSTRALASIAN WOOL SEASON OF 1890-'91.

REPORT BY CONSUL GRIFFIN, OF SYDNEY.

The wool season in all the Australasian colonies is over by the 1st of March. The local sales, however, continue throughout the months of May and June, and the returns of the exports are not made up by the customs authorities until the 1st of July.

The clip was so late in arriving at the points of shipment that many were of opinion that it would be much smaller than that of the previous season.

The arrivals, however, were so heavy during January and February that wool authorities had no hesitation in declaring the product to be the largest ever produced in the colonies. The late arrivals were principally due to the effects of the great labor strike and the bad condition of the roads.

The total shipments of wool from the whole of the Australasian colonies from July 1, 1890, to February 11, 1891, showed a decline of 73,799 bales over the corresponding period for the previous season.

The total number of bales exported from the 1st of July, 1890, to the 1st of March, 1891, was 1,346,972 bales, against 1,298,684 bales for 1889, thus showing a net increase of 48,288 bales for the season just closed.

The subjoined table gives the number of bales exported by each colony during the last two seasons, with the increase or decrease for each:

Colony.	1890–'91.	1889–'90.	Increase or decrease.	1888–'89.
	Bales.	*Bales.*	*Bales.*	*Bales.*
Victoria	361,160	388,902	—27,742	330,783
New South Wales	455,735	425,263	+30,472	411,610
Queensland	96,489	90,089	+ 6,400	89,762
South Australia	144,314	142,880	+ 1,434	117,983
West Australia	25,564	23,814	+ 1,750	21,170
Tasmania	19,721	17,471	+ 2,250	13,565
New Zealand	243,989	210,265	+33,724	207,023
Total	1,346,972	1,298,684	+48,288	1,191,896

The firm of Goldsbrough, Mort & Co. has furnished me with a table showing the shipments in the colonies of Victoria and New South Wales up

to the date of the 5th and 6th of March, and South Australia to the 4th of March, and those of the other colonies up to the 28th of February, which differs very little from the figures given above.

The following is the table of Messrs. Goldsbrough, Mort & Co.:

Colony.	Date.	1890–'91.	1889–'90.	Increase or decrease.
		Bales.	*Bales.*	*Bales.*
Victoria	Mar. 6	379,583	399,589	—20,006
New South Wales	Mar. 5	457,042	438,718	+18,324
South Australia	Mar. 4	145,351	141,476	+ 3,875
Queensland	Feb. 28	98,043	90,205	+ 7,838
West Australia	...do...	25,564	23,812	+ 1,752
Tasmania	...do...	19,699	17,190	+ 2,509
Total for Australia	.....	1,125,282	1,110,990	+14,292
New Zealand (by telegram)	Feb. 28	243,989	210,265	+33,724
Grand total	.....	1,369,271	1,321,255	+48,016

The Messrs. Buxton, Ronald & Co., of London, claimed early in the season to have information to the effect that the product would exceed that of last season by at least 200,000 bales.

The Melbourne Australasian, in a recent editorial, says that it is "at a loss to know from what sources this information was obtained, inasmuch as the past season has been one in which those who have devoted most attention to the statistical branches of the trade have felt the least confidence in any predictions regarding production."

The forces which make for a decrease and those which make for an increase have been many and conflicting, and the actual positions of the exports from week to week have been at variance with the probabilities regarding the final results. The actual increase will probably not fall short of 90,000 bales.

An interesting feature in the exports of wool this season is the quantity purchased by the various banking institutions doing business in Australia.

The purchases made on behalf of the banks have amounted to 164,000 bales, or about 13 per cent. of the total exports.

The following table shows the growth of their purchases since 1878, when the quantity was only 46,996 bales:

Year.	Quantity.	Year.	Quantity.
	Bales.		*Bales.*
1890	164,432	1883	103,142
1889	154,528	1882	80,451
1888	142,457	1881	73,834
1887	120,286	1880	59,758
1886	121,932	1879	72,647
1885	91,611	1878	46,996
1884	111,318		

The following table gives the names of the banks and the quantity purchased on account of each during the years 1890, 1889, and 1878:

Banks.	1890.	1889.	1878.
	Bales.	*Bales.*	*Bales.*
Bank of New South Wales	36,632	33,988	7,305
Union Bank of Australia	28,831	25,403	.....
Bank of Australia	27,124	27,729	5,724
Commercial Banking Company	18,520	18,951	14,178
London Joint Stock Bank*	10,649	10,125	.....
Australian Joint Stock Bank	7,668	7,364	16,645
Mercantile Bank of Sydney	6,797	8,080	3,144
City of Melbourne Bank	5,198	5,200	.....
Bank of Victoria	4,971	7,214	.....
Colonial Bank of New Zealand	4,699	3,705	.....
Queensland National Bank	3,357	2,843	.....
Bank of New Zealand	2,772	.....	.....
Bank of South Australia	2,013	2,928	.....
New Oriental Bank	1,310	.....	.....
National Bank of New Zealand	1,301	.....	.....
Federal Bank of Australia	945	.....	.....
English, Scottish, and Australian Chartered Bank	893	998	.....
Bank of Adelaide	753	.....	.....
Total	164,432	154,528	46,996

* London agents for City Bank, Sydney, and Colonial Bank of Australasia.

The bulk of the London trade is done through five leading firms, viz, The New Zealand Loan and Mercantile Agency Company, Dalgety & Co.; Australian Mortgage, Land, and Finance Company; Sanderson, Murray & Co.; and the Union Mortgage and Agency Company.

The following table gives the names of the principal firms engaged in the export of Australasian wool and the amount shipped by each firm for the years 1890, 1889, and 1888:

Importers.	1890.	1889.	1888.
	Bales.	*Bales.*	*Bales.*
New Zealand Loan and Mercantile Agency Company	96,016	93,118	94,805
Dalgety & Co.	94,905	96,230	100,147
Australian Mortgage, Land, and Finance Company	93,049	77,912	84,161
Sanderson, Murray & Co.	75,486	69,282	73,818
Union Mortgage and Agency Company	52,393	46,005	49,905
Bank of New South Wales	36,631	33,988	29,827
Redfern, Alexander & Co.	33,318	30,461	27,865
R. Brooks & Co.	33,266	28,599	29,593
Union Bank of Australia	28,831	25,403	17,802
Bank of Australasia	27,124	27,729	30,100
A. L. Elder & Co.	22,041	25,470	27,207
Elder, Smith & Co.	20,713	28,896	27,640
E. Holt & Co.	20,221	27,243	21,327

The head of the list is occupied for 1890 by the New Zealand Loan and Mercantile Agency Company (limited). During the last 16 years this firm has headed the list four times, viz, in 1878, 1879, 1880, and 1890. During the same period Dalgety & Co. (limited) have headed the list of importers

eleven times, namely, in 1874, 1875, 1876, and from 1882 to 1889. In 1877 and 1881 the position was occupied by the Australian Mortgage, Land, and Finance Company. These three companies, together with Messrs. Sanderson, Murray & Co. and the Union Mortgage and Agency Company (limited), have for many years past obtained a very large and governing share of the London wool-importing business. In 1878 these five firms, or their predecessors, imported 222,500 bales out of a total of 791,000 bales, their proportion then being 28 per cent. of the total. In 1888 they imported 403,000 bales, or 32 per cent., out of a total of 1,245,000 bales. In 1889 the percentage fell to 31 per cent., the same as in 1887. Last year, however, these five firms imported 412,000 bales, or 33 per cent., out of a total of 1,226,000 bales.

LOCAL SALES.

There has been a slight decrease in the quantity of wool purchased at the colonial sales. This decline, however, considering the depressed state of the market, is not sufficient to cause sheep farmers to lose confidence in the local sales.

In 1883 these sales amounted to only 175,000 bales, or 14 per cent. of the total quantity purchased, but they have vastly increased since that period. The Victoria sales realized this season 247,517 bales, against 266,702 bales for 1889–'90.

The following are the quantities sold by each of the local firms in Victoria during the past two seasons:

Selling brokers.	1890–'91.	1889–'90.
	Bales.	*Bales.*
Goldsbrough, Mort & Co.	66,504	69,123
New Zealand Loan and Mercantile Agency Company	58,981	68,716
Australasian Mortgage and Agency Company	30,434	33,616
Dalgety & Co.	25,899	30,745
Union Mortgage and Agency Company	11,892	12,088
Younghusband & Co.	5,563	4,622
Total Melbourne brokers	199,273	218,910
Dennys, Lascelles, Austin & Co.	32,914	33,041
George Hague & Co.	11,472	10,973
Strachan, Bostock & Co.	3,049	1,631
Other Geelong brokers*	800	2,147
Total Geelong brokers	48,234	47,792
Grand total	247,507	266,702

* Estimated.

The local sales in Sydney amounted to 247,000 bales. It has been noticed, however, that the prices realized, both in Melbourne and Sydney, for 1890–'91 were far below those of 1889–'90. Indeed, according to the Melbourne Argus, one of the highest authorities on Australasian wool, the average price per bale for the season just closed was only £11 8*s.* 2*d.*, against

£14 19s. 4d. for 1889–'90, thus showing a decline of £3 11s. 2d. per bale from that of the previous season.

The following table is furnished by the Melbourne Argus, showing the number of bales sold, total value, and the average price per bale from October 1, 1890, to February 28, 1891, together with a comparison with those of the 12 months previous:

Period.	Number of bales sold.	Value.	Average price per bale.
		£ s. d.	£ s. d.
October 1 to December 31, 1890	173,697	1,997,449 14 2	11 10 0
January 1 to February 28, 1891	69,223	774,576 0 1	11 3 9
Total	242,920	2,772,025 14 3	11 8 2
October 1, 1889, to October 1, 1890	265,019	3,966,725 9 9	14 19 4

DISTRIBUTION OF WOOL PURCHASED AT THE LOCAL SALES.

The subjoined table shows the countries to which the wools purchased at the local sales in Melbourne and Geelong, Victoria; Sydney, New South Wales; and Adelaide, South Australia, were sent from March 1, 1890, to February 28, 1891:

Destination.	From—			Total.
	Victoria.	Sydney.	Adelaide.	
	Bales.	*Bales.*	*Bales.*	*Bales.*
United States and Canada	29,000	2,000	2,011	33,000
France and Belgium	80,000	96,000	15,026	272,000
Germany	34,000	47,000		
England and Scotland	74,500	32,000	11,484	118,000
Japan	1,000	350	.....	1,300
Local speculation for resale in London, and local wool scouring and manufacturing	29,000	52,650	15,278	97,000
Total	247,500	230,000	43,799	521,300

In addition to these, some 56,500 bales have been sold in New Zealand, making a grand total in the four colonies for the 12 months of 578,000 bales, against 612,000 bales sold during the corresponding period 12 months earlier; 34,000 bales, or 5½ per cent., is thus the shortage in the sales.

The local sales at Brisbane and elsewhere will greatly increase the amount, so that when the final returns are made up they will fall much below those of the previous seasons.

The local sales held in Sydney from March 9 to March 12 amounted to 9,144 bales. It is said, however, that, while the prices showed no falling off from those earlier in the season, the class of wool was somewhat mixed and irregular, and comparatively few lots in the grease were in good condition. The proportion of scoured was larger than usual and consisted of locks, pieces, and inferior fleeces.

LONDON SALES.

The prices at the London sales do not appear to have realized as large returns for the owners as those in Sydney and Melbourne. The prices were very low in London in December. In January they had advanced considerably, and especially for crossbreeds. Several failures of woolen factories were reported, and by the 1st of February the market weakened again.

A decided decline was noticed in the local washed wools from Victoria, and it is stated these wools brought 1*s.* 6*d.* (32 cents) per pound less than they did 5 years ago. This decline was so much greater than on ordinary wools that the people here were unable to account for it.

The explanation given by the Argus is that until recently these superior washed wools had a special value for special purposes. They were used, and, of course, still are, for making the very finest quality and lightest weights of ladies' dress goods, being frequently mixed with silk.

For these purposes those splendidly washed fleece wools from the western district of Victoria are even more suitable than the same wools would be in the grease, as they spin much finer, and they are also of a much brighter color.

The demand for these goods, however, appears to have almost ceased. Very low prices were obtained for Queensland wools as compared with the rates ruling at the November series. This is explained by the fact that these wools are this year unusually harsh and discolored and quite unsuitable for making the better class of tops and yarns, owing to the last clip having experienced during the growth an exceptionally heavy wet season, which appears to have stained and matted the wool.

To some extent this fault is also found in wools from the north of New South Wales, where very heavy rains were experienced about a year ago.

NUMBER OF SHEEP.

The steady increase in the number of sheep in Australasia has led to much speculation as to the development of the wool industry in the near future. The number of sheep in the whole of the group is about 110,000,000. Of these, New South Wales has 53,000,000; New Zealand, which is the second wool-producing colony, 16,500,000; and Queensland, 15,000,000. The returns for the other colonies have not yet been published, but it is possible that Victoria, South Australia, and Tasmania have not increased the number of their sheep. In 1889 South Australia had 6,386,617, and Messrs. Elder, Smith & Co. give the number at the present time at 6,432,201 and the value at £1,929,660, or 6*s.* per head. The lambing is given at 80 per cent. on the breeding ewes, or 1,500,000.

The total weight of the clip is estimated at 38,593,206 pounds, and the value at £965,000, or say 12 cents per pound, which, at 6 pounds per head, would give the value of the clip at 72 cents per head.

The Melbourne Argus, in commenting on these figures, says:

Considering that shearing expenses, carriage, railage, and sale expenses have to be paid out of this, the amount netted per head for the clip seems very inadequate to pay interest on the large outlay required to make a sheep station anywhere in Australia.

The area of South Australia is so vast and much of the country so favorably situated that with the help of irrigation she would have little difficulty in carrying several hundred millions of sheep.

Tasmania has not increased the number of her sheep since 1861. The area of that colony is only 26,227 square miles, and, moreover, for many years she has paid far more attention to rearing high-class sheep for breeding purposes than to growing wool for export. Mr. Johnston, the government statistician of Tasmania, in a recent report, says:

Rabbit's fluke and the increasing tendency to fatten stock for market are the reasons generally assigned for the decrease of sheep. No doubt, however, that the greater extent of land taken up for cattle and pigs must be considered.

The area of New Zealand is 104,000 square miles; New South Wales, 310,700; Victoria, 87,884; Queensland, 668,497; South Australia, 903,690; and Western Australia, 1,060,000 square miles. Victoria, although heavier stocked per acre than any of the other colonies, could easily increase the number of her sheep. At present she has 2 acres per sheep, but this is by no means a limit to her carrying capacity. Mr. Coghlan says, if New South Wales, with 2.81 acres per sheep, were taken as the carrying capacity for the whole of the group, there would be room in Australasia for at least 600,000,000 sheep; and even under the present system he sees no just reason why the colonies could not carry 390,000,000, or 280,000,000 more than they now have. Their carrying capacity could be still further improved if they would pay more attention than at present to water conservation and irrigation for the purpose of cultivating artificial grasses.

CONDITION OF THE CLIP.

The clip, although an unusually large one, is very generally regarded as inferior to that of the previous year, especially as to its yielding powers and freedom from burrs. These defects were due to the continued wet weather during the spring and winter. The copious rains at those periods had a tendency to harden the wool and cause it to be pinched at the top. It not infrequently occurs after a wet season that the supply of fine, soft wools becomes short, and this appears to have been the case with much of the wool at the Sydney sales; and this, in a measure, accounts for the small quantity of wools bought here for the American market, and which amounted to only 2,000 bales, one-half of which consisted of lambs' wool. Orders were received for a much greater quantity of lambs' wool, but each order was accompanied by instructions to send only such as was absolutely free from impurities. The few purchases made were at rates varying from 16 to 22 cents per pound.

The New South Wales wools were more abundant in yolk than usual, and a detractive feature was noticed in the early supplies of what is called by the trade "dead yolk." This dead yolk leaves a stain something like iron rust, and no amount of washing will wholly eradicate it. The shearing strike delayed the opening of the selling season, and it was not until November that the first sale took place. From that date until the end of January, with the exception of an adjournment for the Christmas holidays, the sales continued almost daily and averaged from 10,000 to 11,000 bales per day. Mr. J. A. Molineaux, to whom I am indebted for much of the material of this report, informs me that the Sydney sales will, by the 30th of June next, exceed those of any other season. He is of opinion that Sydney, in the near future, will be the chief wool market of Australasia. He attributes the faulty and discolored condition of portions of the clip to the copious rains. The wools from the important districts of Young Cootamundra and Gundagai, from which all the best supplies formerly reached Sydney for the American market, were found to contain too much yolk. Mr. Molineaux examined a large number of bales after they had been dumped for 2 or 3 months and found the wool so unsightly that he refused to buy it for his customers. The best clips for the American market last season came from the northern part of the colony, near the township of Uralla. These included wools from the well-known stations of Terrible Vale, R. Bander, Taraska, and others. They were found to be sound in staple, of good length, free from burrs and seed, and of a bright luster. They readily sold at from 20 to 23 cents per pound. Mr. Molineaux states that the average prices of the New South Wales wools were 20 per cent. lower than they were 12 months ago. The current prices throughout the season were as follows: Super good greasy fleece, from 20 to 22 cents per pound; average, 14 to 16 cents per pound; inferior, 11 cents per pound; superior greasy lambs' wool, 19 to 22 cents per pound; good greasy lambs' wool, 14 to 18 cents per pound; average greasy lambs' wool, 11 to 12 cents per pound; inferior lambs' wool, 10 to 12 cents per pound; scoured fleece, 22 to 32 cents per pound.

The clip in New Zealand was in a much better condition than usual. The sheep there, for the most part, are altogether different from New South Wales and Victoria and the other Australian colonies and consist principally of crossbreeds. The cross is between the original imported merino, of Australia, and the Leicester, Lincoln, and Southdown sheep, from Great Britain, the cross between the merino and Leicester predominating. In Octago district, South Island, and the southern part of North Island the wool is remarkable for its length of staple, density, and firmness and is well adapted for the use of American manufacturers. The woolen mills in New Zealand are always on the lookout for this wool and compete sharply with American buyers for it. The local factories almost invariably give a higher price for it than it would bring in the English or American market. The value of the cross between the merino and the Leicester is determined by its length of staple, the amount of grease it contains, and its strength and clearness. Its average price is 26 cents per pound.

The wools next in value are three-fourths bred. These latter bring nearly as high prices as the crossbreds. The Lincoln wool is the longest and coarsest grown in New Zealand; its fleece is usually very heavy in the grease, often weighing as much as 24 pounds per fleece. The present aim of the New Zealand woolgrower is to raise sheep with a carcass of about 60 pounds weight, suitable for the frozen-meat export trade. This, however, can not be done without injury to the quality of the wool, and, if persisted in, will sooner or later destroy the production of fine wool in that colony. The price paid for frozen mutton is 4 cents per pound, subject to the restriction of 60 pounds to the carcass.

SAMPLES OF WOOL.

There seems to be a general impression here that American wools are not equal in strength, fineness, and luster to those grown in Australasia, and especially in western Victoria and the Riverina district. The samples of American wools, and especially those grown in the State of Ohio, sent to the Melbourne International Exhibition did much to remove the false impression in regard to American wools. These samples were admitted by experts to be far superior to anything of the kind ever grown in these colonies. American farmers, however, have to admit that these wools can be much more economically grown here than in the United States, or else manufacturers could not afford to pay the cost of transportation and the duty of 10 cents per pound upon them.

The Hon. W. G. Markham, president of the Woolgrowers' and Sheep-breeders' Association of New York, who has done so much to improve the flocks of Australasia by the introduction of blooded sheep from Vermont, Michigan, and other States of the Union, has promised to send to the Sydney Technological Museum a full set of samples of American wools. I understand that these samples are on their way here. The museum has a magnificent collection of wools from the principal countries of Europe, as well as from the Australasian colonies and South Africa, but it has no samples of American wools, and the arrival of Mr. Markham's collection is looked forward to with much interest.

Among the samples in the museum especially worthy of mention are those from the celebrated Erceldoune estate of Sir Samuel Wilson, at Burrumbeet. I have been permitted to examine these samples through the kindness of Mr. Alfred Hawkesworthy, "wool-classer" to the museum. The samples are precisely the same as those I sent to the Department for the National Museum, at Washington, last year, and, as they attracted much attention there, I have thought the following account of the formation of the stud flock from which they were obtained would not be without interest to American woolgrowers.

The Messrs. Learmouth were the first white men to visit Burrumbeet in 1837, and they were so much impressed with the nature of the soil and other conditions of the district that they took possession of large tracts of country and stocked it with Tasmanian sheep. Lake Burrumbeet, from which the

place derives its name, soon became dry and, from the great quantity of vegetable matter left, was for a number of years a rich pasturage for the sheep, which showed such a marked improvement, both in body and wool, that the owners were induced to secure some pure pedigree sheep which happened to be for sale at that time.

It was in 1848 that the pure flock, the origin of the present stud flock, was obtained by Messrs. Learmouth.

These sheep were the descendants of the first great importation of Spanish merino, which had been secured in 1785 by the Elector of Saxony as a great favor from the King of Spain, and which formed the best flock in that Kingdom.

The late Mr. Forlonge obtained a portion of this celebrated breed, which was termed the "electoral flock," and these were brought to Tasmania.

After a short time they passed into the hands of Mr. (now Sir) William Mitchell, who brought them to his Barfold station, near Kyneton.

To induce Sir William Mitchell to part with them, Mr. Learmouth offered two sheep to one of the pure flock, and thus obtained the pure breed he so much desired. Such is the origin of the pure Ercildoune flock. About the year 1851 a few rams from the celebrated Camden stud were used, and in 1862 some sheep from Mr. Kermode's pure flock from Mona Vale. Tasmania were also used to great advantage. In 1873 Ercildoune was purchased by Sir Samuel Wilson, and under the skillful classing and selecting of Mr. Jonathan Shaw a great improvement has been made in the size of the sheep and in the quantity and quality of the wool, which is confirmed by the high price paid for Ercildoune washed wool in 1886 during the great depression, viz, $1.23 per pound, the highest price ever paid in open market. This wool has carried off the gold medal at nearly all the international exhibitions in Europe for the last 30 years. It is of medium length and of a pure, clear fiber, very finely and regularly serrated, of great elasticity and softness, with beautiful luster. As a manufacturing wool it can be used for many purposes. On account of its beautiful luster and softness, it is bought by silk manufacturers to mix with silk, and very little wool grown can be used for that purpose. As a combing wool to make the best of fancy dress goods it is said to be unsurpassed. It has what is called full weight in "lop," or "silver." For hosiery materials it is highly esteemed, and when made into yarn for that purpose, which is not subject to the hard twisting required in combing or worsted yarns, it shows to great perfection in fullness, softness, and brightness, and can be used for pure white goods or can be dyed the most delicate shades; also, it may be used on the finest branches of cloth manufacture, such as broadcloth and billiard cloth, and its felting powers are believed to be unsurpassed. Its spinning qualities have given the highest counts of any wool ever grown in Australasia. Several ewes have been sold from the flock that averaged $1,115 each.

AMERICAN EXPORTS.

The exports of wool to the United States were nearly three times greater than those of the previous season, and it is believed that when the returns are made up for the 30th of June next they will exceed those of any other year since the establishment of the industry in 1871. These exports fluctuate from season to season, but they have never at any time been very large. Previous to 1871 only about 1,200 bales had been exported. During the season of 1871–'72 they amounted to 18,659 bales, but they declined in 1877–'78 to 5,071 bales and in 1878–'79 they were absolutely nothing. In 1888–'89 they reached 37,175 bales and in 1889–'90 they declined to 12,340 bales. With the exception of the season of 1878–'79, no other season reached anything like the figures of the present one.

I give below a table showing the wool exports from Australasia to the United States for each season from 1871–'72 to 1890–'91:

Year.	Quantity.	Year.	Quantity.
	Bales.		*Bales.*
1871–'72	18,659	1882–'83	5,794
1872–'73	11,851	1883–'84	14,863
1873–'74	9,745	1884–'85	6,221
1874–'75	19,042	1885–'86	20,161
1875–'76	5,032	1886–'87	15,360
1876–'77	7,567	1887–'88	22,379
1877–'78	5,071	1888–'89	37,175
1879–'80	17,551	1889–'90	12,340
1880–'81	3,372	1890–'91	31,000
1881–'82	11,070		

The small exports of 1889–'90 are attributed to the market being overstocked from the previous season and to the indifferent selections made by local buyers. During the present year about 16,000 bales of Australasian wool were purchased in London for the American market, thus making a total of 47,000 bales; and it is estimated that by the 30th of June next the United States will have received fully 100,000 bales of Australasian wool. This estimate is based on the increased demand occasioned by our new tariff, which, while not changing the tax on wool, has increased the tax on woolen manufactures.

The following table shows the consumption of colonial wool for each year in the United States since 1881:

Year.	Quantity.	Year.	Quantity.
	Bales.		*Bales.*
1890	48,000	1885	37,000
1889	67,000	1884	42,000
1888	47,000	1883	33,000
1887	58,000	1882	33,000
1886	57,000	1881	18,000

Considering the superior facilities for shipping wool at Sydney, it is remarkable that the bulk of the supplies for the United States should be obtained at Melbourne; but much of the New South Wales wool, and especially that in the Riverina district, finds its outlet at Melbourne, and, besides, the wools from western Victoria are equally as well adapted for the American market as those from the most favored districts of New South Wales. During the season just closed, as previously stated, only 2,000 bales of wool were sent to the United States from Sydney, against 29,000 bales from Melbourne. Of these shipments 1,292 bales were sent to San Francisco by the steamers *Alameda* and *Mariposa* and 10,508 bales to Boston by sailing vessels.

The following table shows the names of the vessels carrying this wool, the amount taken by each, and the ports of destination:

Destination.	Ship.	Date.	Quantity.
		1890.	*Bales.*
London	Valetta	Oct. 25	423
San Francisco	Alameda	Oct. 29	753
London	Orizaba	Nov. 1	134
Do	Ballarat	Nov. 8	670
Do	Orient	Nov. 15	327
Do	Parramatta	Nov. 22	473
Do	Pathan	Nov. 26	164
San Francisco	Mariposa	.....	454
London	Ormuz	Nov. 30	575
Do	Australasian	Dec. 2	67
Do	Oceana	Dec. 6	181
Boston	Benj. F. Hunt	Dec. 12	5,272
London	Oratava	Dec. 13	553
Boston	Coldinghame	Dec. 16	5,336
Do	Miako	Dec. 17	2,399
London	Afghan	Dec. 20	1,821
Do	Rome	.....	627
Do	Collingwood	Dec. 22	490
San Francisco	Monowai	Dec. 24	77
		1891.	
London	Britannia	Jan. 3	57
Do	Durham	Jan. 10	942
Boston	Jerusalem	Jan. 15	4,031
London	Massilia	Jan. 17	51
Do	Falls of Garry	Jan. 16	1,016
Do	Pt. Caroline	Jan. 22	83
Boston	Hulda	.....	610
San Francisco	Alameda	Jan. 20	8
Total			27,588
Quantity purchased since (about)			1,500
Total Melbourne purchases			29,088
Sydney purchases			2,000
Grand total			31,088

Several hundred bales of the shipments to Boston were purchased on account of manufacturers in the Canadian Dominion.

G. W. GRIFFIN,

UNITED STATES CONSULATE, *Consul.*

Sydney, March 23, 1891.

BERLIN STREET-CLEANING.

REPORT BY CONSUL-GENERAL EDWARDS.

In many municipal departments the variations of weather in different years, by affecting the amount of work done, influence the fluctuations of expense. In no department is this influence more marked than in that under consideration. Snowy winters necessitate an immense increase of the labor force (men and horses); hence the expenses are in such years much greater than in meteorologically less unfavorable years.

For the removal of snow alone in the fiscal year 1887'–88 619,776 marks* were expended. In the fiscal year 1888–'89 this item of expense was 486,092 marks.

Leaving these two severe winters out of account, the other 5 years of the period under report show only the small natural increase in expenses due to the extension of the street network. The number of workmen regularly employed was, in the fiscal year 1882–'83, 572; and in the fiscal year 1888–'89, 588. As the street area to be cleaned every day was in the former and latter years, respectively, 2,643,310 and 2,824,632 square metres, the average daily amount cleaned by each workman increased from 4,621 to 4,804 square metres.

The number of lads who receive 1½ marks per day for cleaning asphalt streets increased from 26 to 76. In no year was it possible to avoid the employment of supplementary workmen, in larger or smaller numbers according to the weather.

The daily earnings of these additional workmen were 2 marks (57.6 cents). Of the regular employés, the principal workmen receive 3½ marks, and the other workmen 2½ to 3 marks, per diem.

The following table shows the fluctuations in the work done by, and the wages paid to, supplementary workmen during the period under report:

Years.	Number of days worked.	Wages.
		Marks.
1882–'83	16,916	32,832
1883–'84	4,312½	8,625
1884–'85	19,217½	38,435
1885–'86	48,895	97,790
1886–'87	33,272	66,544
1887–'88*	82,448½	164,897
1888–'89*	53,111½	106,223

*There was an unusual fall of snow in both of these years.

The regular overseers, 6 in number, received from 2,160 to 2,700 marks ($514 to $632) per annum. The regular underoverseers, 21 in number,

*1 mark = 23.8 cents.

received from 1,500 to 1,830 marks ($357 to $435) per annum. Uniforms and tools were supplied free to 10 men. Regular employés unfit for duty received pensions of from 400 to 600 marks ($95 to $142) per annum. While the number of employés was not materially increased, there was a considerable increase of machine power. In the year 1889 42 sweeping machines were in use.

For the sum of 6 marks ($1.63) per diem contractors supplied horse and driver and kept the machine in order. The estimated daily expense of keeping these sweeping machines in order was 50 pfennigs. The cleaning capacity of such machines depends upon the nature of the pavement, and ranges from 5,500 square metres per hour on bad pavement to 8,500 square metres per hour on asphalt pavement.

The street sweepings have always been removed by private contractors, who are bound to remove every day all street filth to dumping places. There are special requirements in regard to wagons, teams, uniforms of drivers, etc. The contractors must supply the dumping places, and, in return for this responsibility, they receive for their free use the street sweepings. The total amount of street sweepings removed was as follows:

Years.	Number of wagon-loads.	Years.	Number of wagon-loads.
1882–'83	95,493	1886–'87	95,095
1883–'84	94,662	1887–'88	96,206
1884–'85	95,989	1888–'89	97,969
1885–'86	94,380		

The number of loads, therefore, varied very little in spite of the considerable increase of area to be cleaned. In fact, in the year 1888–'89 the number was about 16,000 less than in 1878, when it amounted to 113,994 wagonloads. This was due to the constant increase of good, impervious pavements.

The contractors are bound under all circumstances to supply enough wagons to remove each day all street waste. The number of wagons required varies with the weather; in dry weather often hardly half so many wagons are needed as in wet weather. The annual amount paid to the contractors was, up to April 1, 1883, 420,900 marks. Then, in accordance with a 5-year contract, which expired April 1, 1888, the sum was reduced to 361,200 marks. Since then the annual amount paid out for this purpose was 378,160 marks.

For the removal of snow separate payment was made by the wagonload. In this there was also a variation of prices, 1.75 to 2.50 marks being paid per wagonload. For avoiding mistakes a special check system was used in connection with the removal of snow. Furthermore, it was so planned that the principal streets were first cleaned of snow, the process of removal beginning in the center of the city and extending outward.

The number of wagons used during the year 1888–'89 for sprinkling purposes was 150. The old 1,000-litre wagons were replaced by 1,500-litre sprinklers.

The amount paid to contractors for sprinkling with these wagons was, in the year 1881, for the 120 wagons then in use, 170,000 marks. By contract from 1882–'83 to 1885–'86 this amount was reduced to 148,500 marks per annum. Since 1887–'88 the amount paid for this purpose was 220,200 marks per annum.

From the municipal waterworks there was supplied for street-sprinkling as follows:

Year.	Quantity.	Year.	Quantity.
	Cub. met.		*Cub. met.*
1882–'83	506,786	1886–'87	848,478
1883–'84	663,482	1887–'88	773,474
1884–'85	617,225	1888–'89	719,494
1885–'86	672,550		

By contract the street-car companies were required to clean and sprinkle their tracks and the street surface on each side for a distance of 0.65 or 0.70 metre. By special contract the city assumed this responsibility, the street-car companies paying three-fifths of the cost actually incurred in this way. The receipts from this source were:

Years.	Amount.	Years.	Amount.
	Marks.		*Marks.*
1882–'83	66,140	1886–'87	84,041
1883–'84	71,850	1887–'88	100,205
1884–'85	78,549	1888–'89	101,410
1885–'86	81,184		

By the introduction of the municipal street-cleaning system Berlin propertyholders were relieved of their legal obligation to clean the streets. By the general sewerage system they were relieved of their obligation to remove house and kitchen slops, as well as human excrement. But they are still responsible for the removal of matter which can not be admitted to the street sewers and pipes, such as kitchen waste, house sweepings, sand, ashes, broken crockery, and other solid stuffs.

As the growth of the city within its limits increased, the possibility of propertyholders disposing of such substances in a legal way became constantly more difficult. The contractors for the removal of street filth frequently, secretly and at night, unloaded such matter on vacant city lots and in parks. If caught and fined once, this did not deter them from doing the same thing again. Moreover, the authorities of adjoining communities were equally averse to receiving such matter.

Finally the city council, recognizing the necessity, decided to establish on land which had been previously rented three dumping places for such

matter, 60 pfennigs and 40 pfennigs, respectively, being charged for the privilege of dumping thereon a two or one horse load. During 4 months of 1887 10,390 loads were thus disposed of. The receipts amounted to 6,895.25 marks.

In the fiscal year 1888–'89 49,736 loads were thus disposed of. The receipts were 29,336.87 marks; expenses, 21,694.93 marks; so that the clear gain was 7,641.94 marks.

This result was exceedingly favorable, as under the expenses were included interest on capital, amount of rent lost, house and rent tax, etc. But it can not be expected that this will be a permanently paying venture. In the short period of 16 months 60,126 loads have been dumped on an area of about 21 acres. From year to year this practice will grow. A final removal of the matter thus accumulated to make room for further unloading will occasion a very considerable pecuniary sacrifice. The only final solution of this question which seems practical is the purchase of a dumping ground far away from the city and large enough to suffice for decades, whither all matter which can not be removed through the sewers can be transported in boats.

W. H. EDWARDS,
Consul-General.

UNITED STATES CONSULATE-GENERAL,
Berlin, March 21, 1891.

Port of Torres, Brazil.—Consul Negley, of Rio Grande do Sul, in his report on Porto Alegre, published in CONSULAR REPORTS No. 126, (March, 1891), says:

The only approach at present from the outside world is over the bar at Rio Grande do Sul and up Lake Patos 150 miles. There is a project for shortening this approach from the north by means of a railroad extending 240 kilometres in a northeasterly direction to the seacoast at Torres, the proposed terminus of the line, and for the construction there of an artificial breakwater and harbor. The concession has been granted, but unaccompanied by any guaranty of interest. Without such guaranty—the usual method of making a thing "go" in this country—the raising of $15,000,000 (the estimated cost of the scheme) will be no easy undertaking.

In a subsequent report Consul Negley says that a telegram from Rio de Janeiro was received at Rio Grande do Sul and published in the Artista of February 20, 1891, to the following effect:

The Official Journal (Rio de Janeiro) publishes to-day (February 20) the decree concerning the guaranty of interest of 6 per cent. during 20 years on $4,000,000, with exchange at 40 cents to the milreis, to Messrs. Dr. Viriato de Medeiros and Alfredo Dillon, that they may carry into effect the construction of the port of Torres.

AUSTRALASIAN WHEAT HARVEST, 1890–'91.

REPORT BY CONSUL GRIFFIN, OF SYDNEY.

The delay in the publication of the agricultural returns of the seven colonies composing the Australasian group renders it very difficult to form an approximation of the actual quantity of wheat produced, even after the harvest has been gathered for a considerable period. Only three of the colonies in the group, viz, South Australia, Victoria, and New Zealand, have thus far been able to produce wheat enough for home consumption, much less for export. The remaining colonies—New South Wales, Queensland, Western Australia, and Tasmania—have always been large importers of wheat and flour, New South Wales usually heading the list. Last year she imported 5,077,925 bushels, after one of the largest harvests in the history of the colony.

A considerable portion of these imports came from the United States, but a much larger portion came from Victoria and South Australia. The latter colonies, besides growing wheat enough for home consumption, have in most seasons been able, not only to supply the deficiency in other parts of Australasia, but to export considerable quantities to Europe.

Mr. T. A. Coghlan, the Government statistician of New South Wales, estimates the wheat product of Australasia at 43,244,000 bushels. The average production for 1889–'90 was 10.98 bushels per acre, and the same average would apply to the seasons of 1890–'91. This is the largest average since 1886–'87. Mr. Coghlan states that a production of 43,244,000 bushels would leave a surplus of 12,321,000 bushels for external export.

During the period from 1881–'82 to 1889–'90 the area under wheat in Australasia increased at an annual average rate of 1.76 per cent. Assuming that the same rate held good for 1890–'91, the area cropped in that season would be 3,938,454 acres, which area, at the average rate of production for the last 10 years (10.25 bushels per acre), would yield 40,369,256 bushels of wheat. Taking the population at 4,000,000 souls and the average consumption per head at 6.5 bushels, a total of 26,000,000 bushels would be required for food, in addition to 4,923,000 bushels for seed, being at the rate of 1.25 bushels per acre for 3,938,464 acres. The aggregate requirements for Australasia would thus be 30,923,000 bushels of wheat for the year, which, deducted from the total production as above, would leave 9,446,000 bushels available for external exportation. But, as the yield per acre promises to exceed the average of the last 10 years, this estimate will probably be exceeded. The average production of 1889–'90 was 10.98 bushels, and, if the same average should be reached in 1890–'91, the production would be, as previously stated, 43,244,000 bushels.

Mr. Coghlan further says:

Taking Australasia as a whole, the acreage under wheat has increased by about 503,000 acres since 1881. The larger proportion of the increase is due to Victoria and New South

Wales. South Australia shows some slight increase, while New Zealand, on the contrary, exhibits a decline of nearly 30,000 acres. From this it will be seen that, with the exception of the farmers of Victoria, those of the other wheat-exporting colonies show a disposition to decrease the acreage under wheat and extend the cultivation of other crops.

Nor is this experience exceptional in other countries. Mr. Roper, the compiler of the "Yearbook of Canada," states:

Were it not for the British demand, it is questionable whether wheat would be any longer a profitable crop in Canada beyond the limit of home consumption, and in any case one thing appears certain—that only under some unexpected and untoward circumstances can wheat ever approach in value the price of former years.

NEW SOUTH WALES.

Mr. Coghlan has just issued a statement in regard to the harvest of New South Wales for 1890–'91, in which he gives the crop at only 4,300,000 bushels, against 6,460,000 bushels for 1889–'90, and the area at 385,000 acres, against 407,400 acres in 1889–'90. The following is the statement referred to, which also gives the average yield per acre, the average yield for the past 29 years, the amount of wheat available for consumption, etc.:

Year.	Estimated area harvested.	Yield.	Average yield per acre.*	Available for consumption.†	Probable consumption.	Probable deficiency.
	Acres.	*Bushels.*	*Bushels.*	*Bushels.*	*Bushels.*	*Bushels.*
1890–'91	385,000	4,300,000	11.17	3,725,000	7,700,000	3,975,000
1889–'90	407,400	6,460,000	15.86	5,910,000	7,500,000	1,500,000

*Average yield per acre for the past 29 years, 13.14 bushels.
†After deducting 575,000 bushels for seed, etc.

It will be seen from the preceding table that the average yield per acre for the season just closed is only 11.17 bushels, against 15.86 bushels for the previous season, and 2.17 bushels less than the average yield per acre for the last 29 years, which is given at 13.34 bushels per acre. After allowing 575,000 bushels for seed, it is expected that 3,725,000 bushels will be available for consumption. As the total consumption is estimated at 7,700,000 bushels, there is an estimated deficiency of 3,975,000 bushels. While the estimated quantity of foreign wheat required was 1,500,000 bushels, it appeared that the actual import was 1,800,000 bushels. The stock at the beginning of 1890 was estimated at 590,000 bushels. The stock at the beginning of this year is believed to be about 800,000 bushels, an increase of 210,000 bushels on last year's figures, making the total quantity imported for consumption 1,590,000 bushels. These figures practically verify the official estimates of last year. The quantity of flour imported during 1890 amounted to 55,233 tons and the export to 20,554 tons, making the net import of flour 34,679 tons. The wheat imported was 362,486 bushels and the export 219,228 bushels. The net import was therefore 143,258 bushels.

The harvest of the northern table-lands is but slightly less than that of last year. In the west, however, it is estimated not to have exceeded 10 bushels per acre. In the southwestern district it was about 12 bushels. It

is estimated that the quantity of wheat required for the district depending on importations at Newcastle will be about 800,000 bushels. Importations by way of the River Darling and overland from South Australia will be about 220,000 bushels. The quantity required to make good the deficiency of the rest of the colony is fully 3,000,000 bushels, most of which will need to be imported into Sydney. Up to this date New South Wales is the only colony in the group in which an official estimate has been made by the respective statisticians.

VICTORIA.

An estimate, however, has been made by the statistician of the Melbourne Australasian, and the yield of that colony is given at nearly 18,000,000 bushels, the exact figures being 17,985,250 bushels, the highest yield on record. It is worthy of remark that the estimates of the Australasian have for many years differed very little from those of Mr. Hayter, the Government statist of Victoria. I have therefore never hesitated to use them in the absence of those of Mr. Hayter. The figures, however, for the season just closed place Victoria for the first time at the head of the list of wheat-producing colonies. The yield for Victoria in 1889–'90 was 11,495,720 bushels, thus showing an increase for 1890–'91 of 6,489,530 bushels. I am indebted to the Melbourne Australasian of the 21st instant for the subjoined table, showing the quantities and the exportable supply of breadstuffs in Victoria, together with the yield of the harvest, etc.:

Articles.	Quantity.	
	Bags.	Bushels.
Wheat and flour received at Spencer street, Port Melbourne, Williamstown, Moreland, Newmarket, Kensington, and Geelong from December 29, 1890, to March 7, 1891	.....	3,587,447
Wheat received during the week ended March 14, 1891	89,845	.....
Flour received during the week ended March 14, 1891	8,783	422,243
Total imports	.....	4,009,690
Consumption at Melbourne and suburbs and Geelong, 11 weeks, at 56,000 bushels per week	.....	616,000
Shipments of wheat and flour to March 7, 1891	.....	2,078,678
Wheat exported during the week ended March 14, 1891	19,485	.....
Flour exported during the week ended March 14, 1891	14,981	151,724
Exports from Melbourne by rail, say 100 tons of flour per week for 11 weeks	.....	50,600
Total exports	.....	2,897,002
Difference in favor of imports	.....	1,112,688

The general statistical position is now as follows:

	Bushels.	Bushels.
Yield of wheat harvest, as per the Australasian estimate		17,985,250
Year's consumption in Victoria, 1,160,000 persons, at 5½ bushels	6,380,000	
Seed for 1,250,000 acres, at 1¼ bushels	1,562,500	
Exports of wheat and flour to March 14, as above	2,230,402	
		10,172,902
Exportable surplus		7,812,348

The estimated total still available for shipment is 209,259 tons. Shipments of breadstuffs on account of the present season show a total of 89,743 tons. The immense stride made by Victoria in wheat production is due in a large measure to her agricultural department, and especially to the agricultural college, to which I have on various occasions drawn attention in my reports to the Department. The principal of the college, Mr. Thompson, has given particular attention to the growth of wheat. In a report dealing with the crops for last season he mentions that the seed known as the White Rose and the Farmer's Friend yielded large returns per acre. In the series of experiments initiated to ascertain the best varieties of wheat for sowing, he found, out of one hundred and twenty-one different kinds, that the best results were obtained from the following: Lost Nation, China No. 2, Pringle's No. 1, Centennial Black, Dominion, Port M'Donnell, Rattling Tom, Steinwedel, Purple Straw, Tuscan, Essex, Farmer's Friend, Fill Bag, Northern Champion, White Fyfe, Rio Grande, Incomparable, Excelsior, Saratow, Canadian Club, Golden Globe, Berthond's Rietic, Galland's Hybrid, Bancroft's Improved, Sherman's Purple Straw Spring, Champlain Hybrid, Du Toit's, Webb's White Challenge and Purple Straw.

Mr. Thompson tried twenty-six different kinds of manure, and among the best were superphosphate, guano, common salt, bone dust, Maldon Island guano, and farmyard manure. He is of opinion that the best time for sowing seed is from the 12th of April to the 24th of May. He says that it is more profitable to keep the seed in the barn and fallow the land, if it can not be got in by the end of May. He recommends the farmer to thoroughly work and pulverize his land, and says that the cutaway disc is the best implement to use for this purpose. He did not find the drilled land to show any extra results; but the results from the Lois Weedon system of growing wheat sown in alternate strips, the strips left unsown being sown and cultivated the following year, are worthy of attention. It is claimed for this system that the air circulates better through the crop and prevents rust. Otherwise it is equal to fallowing the land every second year.

SOUTH AUSTRALIA.

The wheat product of South Australia for the season 1889–'90 was 14,495,720 bushels, but the highest yield reported for 1890–'91 was 13,550,000 bushels. The estimates, however, have not been obtained from official sources, but from the leading agricultural journals in that colony. The small yield is said to be due to the ravages of grasshoppers. The heavy rains also interfered with the crop at the time of gathering it, but the quality of the wheat was fully up to the usual high standard. The prices thus far, both at the local and London sales, were in advance of those for any other colonial wheat. It is considered, however, by the leading agricultural journals in Melbourne that the Victorian wheat is now fully equal to that of South Australia, both with regard to quality and weight per bushel. Indeed, the grain, particularly in districts where it has not been grown successfully, is

said by millers to be unsurpassed for the production of the choicest brands of family flour. Heretofore Victorian wheat averaged in weight considerably below that of South Australia, but recently a decision has been made by which the average shipping quality of Victorian wheat is fixed at 64 pounds per bushel, being the same as the South Australian average. This information was cabled to London on the 4th instant by the Melbourne Chamber of Commerce, and it appears to have had a decided effect on the market there, the Victorian product realizing nearly the same prices as that of South Australia. A cargo of Victorian wheat realized on the 5th instant $8.72 per quarter, being the highest price paid for several years. The heaviest weight tested by the chamber of commerce was 65½ pounds per bushel, although information was to hand of several sacks of prime Victorian seed wheat averaging 69 pounds to the bushel.

The following statement shows the average weight of wheat per bushel in various districts:

	Pounds.
Tatura district	65½
Nathalia district	65
Nullan district	65
Waaia district	65
Dingee district	64¼
Numurkah district	63¼

The rotation system of growing wheat is becoming very popular in the leading grain districts. A series of experiments has recently been conducted at Port Fairy by Mr. A. N. Pearson, agricultural chemist for the Victorian Government, for the purpose of testing the value of rotation crops and the use of manures.

Several plots were marked off in the same paddock, and were, in 1888 and again in 1889, manured and sown with mangolds, whilst in 1890 Steinwedel wheat was sown without further manuring. The following yields were obtained: Plot 4, with complete heavy manure, gave, in 1889, 103 tons of dressed roots per acre; in 1890, 44¾ tons of dressed roots per acre; and in 1891, with the residue of the previous year's manure, 44¾ bushels of Steinwedel wheat per acre; plot 7, with medium manure without potash, yielded, in 1889, 85 tons of dressed roots per acre; in 1890, 44¼ tons of dressed roots per acre; and in 1891, with the residue of the previous year's manure, 38⅓ bushels per acre of Steinwedel wheat; plot 8, without manure, gave, in 1889, 21 tons of dressed roots per acre; in 1890, 19½ tons of dressed roots per acre; and in 1891, 28⅔ bushels per acre of Steinwedel wheat. The significance of these results is shown by a comparison of yields obtained from white Tuscan wheat grown in 1891 in the same paddock, but in succession to wheat crops. With complete heavy manure the yield was 40 bushels per acre; with medium manure without potash, 33 bushels; and without manure, 12½ bushels. It will be seen that the advantage of the rotation of crops was especially noticeable in the case of the unmanured plots.

In that part of Victoria bordering on South Australia the land is said to be especially adapted to wheat, and the same method of harvesting is used thus far in the Wimmera district. The stripper is preferred to the reaper and binder, and it is said that it will continue to be preferred until the pioneer stage of settlement has been completed, for the reaper and binder can not be introduced successfully until the stumps and roots of the mallee scrub are worked out. Moreover, the burning of the straw left by the strippers is one of the best means of killing the fresh mallee shoots. This mallee country was supposed, until a few years ago, to be worthless, but since the introduction of irrigation it has been found to be well suited for grain. Much of the wheat averaged 30 bushels to the acre, and in seasons of drought it was seldom below 8 bushels. The cost of stripping the grain is $1.10 per acre. The Wimmera district has already shipped to Melbourne 1,560,000 bushels of wheat. Thirty special trains arrive daily, besides those ordinarily engaged in carrying grain, and the farmers look forward to extending the production of wheat to almost unlimited proportions in the near future.

NEW ZEALAND.

The harvest in New Zealand is described as scant. The area in wheat was less than that of 1889–'90, when it was 26,292 acres less than that of the previous season, the exact figures being 335,861 acres for 1889–'90 and 362,153 acres for 1888–'89. The product for the former season was 8,448,506 bushels and the latter 8,770,246 bushels. The estimate for the season just closed is 7,560,000 bushels. The truth is, the New Zealand farmers find it more profitable to export frozen mutton than to grow wheat, and the enormous increase of the former industry can be best illustrated by the statement that the export of frozen mutton for the year 1890 was more than double that of 1887. In the latter year (1887) they exported 766,417 carcasses; in 1888, 938,766 carcasses; in 1889, 1,068,506 carcasses; and in 1890, 1,531,901 carcasses; while all the other colonies put together exported but 208,314 carcasses. The export of frozen beef also showed considerable expansion. In 1890 the increase over the preceding year amounted to 12,937 pieces. It is a matter of regret that the wheat industry of New Zealand should be allowed to decline, for the grain is of the very best quality and commands a high price in the London market. Moreover, the average yield per acre is nearly double that of any of the other colonies. In 1889–'90 the average yield was 25.15 bushels; in 1888–'89, 24.22 bushels; and in 1887–'88, 24.4 bushels. The lowest in 10 years was in 1881–'82, when it was at the extraordinarily low figure of 22.68 bushels per acre.

The following table shows the average of the principal wheat-growing districts for the year 1890:

	Bushels.
Auckland district	21.44
Canterbury district	28.03
Wellington district	27.62
Hawke's Bay district	37.04

These extraordinary averages are not the result of artificial manuring, but from the ordinary alluvial land that has been enriched by a crop of grass or turnips upon which sheep have been fed the year previously. It is no uncommon thing for land in the Crown Terrace district, in South Island, New Zealand, to produce as much as 100 bushels of wheat per acre. The soil and climate of New Zealand are perhaps better adapted for the growth of grain than those of any other colony in the group; but the high cost of labor and railway transportation, as well as the lack of improved facilities for handling the crops, prevents the industry from being a profitable one.

QUEENSLAND.

The wheat production of Queensland has always been small. The estimate for the season just closed is 133,680 bushels, against 134,335 bushels for 1889–'90.

The small area under wheat in Queensland is a matter of surprise, when so much of the vast territory is suited to the growth of cereals. On the tablelands, particularly in Darling Downs and the Canning Downs, the yield per acre is very large, and the quality is fully equal to that grown in any other part of Australasia; and yet the people look to the other colonies and to the United States for their wheat and flour.

The population of Queensland is estimated at 406,000, but it is believed that the census now being taken will show at least 480,000. Should this estimate prove to be correct, the colony will require to import during the present year fully 2,500,000 bushels of wheat. The bulk of the wheat supply is shipped by way of Sydney. A steady progress, however, has been noticed, both in the acreage under cultivation and in the average yield per acre. In 1861 she had but 123,468 acres; in 1871, 154,030 acres; in 1881, 221,888; in 1889, 413,000; and in 1890, 419,758 acres. The average yield per acre for the 10 years from 1881 to 1891 is given at 10.38 bushels per acre, against 10.01 per acre for Victoria and 6.59 for South Australia, the two great wheat-producing colonies of the group.

TASMANIA.

The area under wheat in Tasmania for 1890–'91 may be given at 55,812 acres. In 1861 it was 58,823; in 1871 it advanced to the highest figure yet reached, 63,332 acres; in 1881 it declined to 51,757 acres, and in 1889 to only 49,055 acres. The yield for the season under review will probably be larger than that of the previous one, although it is said that the crop has suffered from rust. The net import of wheat in 1890 was 186,412 bushels. In 1889 the net import for the whole of the group was 972,656 bushels, the bulk of which came from the United States. In the same year the total net external exports, chiefly to Great Britain, were 2,532,478 bushels.

WESTERN AUSTRALIA.

The estimated yield of wheat in Western Australia for the season just closed is 500,000 bushels, against 470,000 bushels for 1889–'90. The popu-

lation is only 43,000. The yield in proportion to population is large in comparison with that of the other colonies, but the territory is so vast and the settlement so scattered that it is found cheaper to import grain and flour from South Australia than to transport it within its own borders.

In 1861 the colony had only 13,584 acres under wheat; in 1871 it had 21,951 acres; and in 1889, 35,517 acres.

YIELD AND CONSUMPTION.

The following table shows the annual average yield and consumption for each colony during the 10 years ended in 1889, with the surplus or deficiency in each case:

Colony.	Yield, less quantity required for seed.	Consumption.	Surplus available for export.	Deficiency to be imported.
	Bushels.	*Bushels.*	*Bushels.*	*Bushels.*
New South Wales	3,709,000	5,913,000	.....	2,204,000
Victoria	9,445,000	6,022,000	3,423,000	.....
Queensland	92,000	1,838,000	.....	1,746,000
South Australia	8,600,000	1,962,000	6,638,000	.....
Western Australia	297,200	385,000	.....	87,800
Tasmania	694,000	874,000	.....	180,000
New Zealand	7,656,000	4,172,000	3,484,000	.....
Total	30,493,200	21,166,000	9,327,200	.....

The importance of Australasia as a producer of wheat is but small when compared with the great wheat-producing centers of the world. Out of 2,057,000,000 bushels produced in 1889, only 42,000,000 bushels, or 2.06 per cent., were of Australasian growth.

RUST IN WHEAT.

It seems almost impossible to overcome the ravages of rust in wheat, especially along the coast, where the rains are frequent. Much attention has been paid to the subject in every one of the colonies. Mr. A. N. Pearson, agricultural chemist for Victoria, is of opinion that the experiments he has been conducting at Port Fairy, in the western district of that colony, and in Gippsland are likely to be productive of useful results. The object of these experiments is, by means of careful selection assisted by hybridization, to improve the quality of seed in respect of prolific bearing, milling character, rust-resisting capacity, and general suitability for culture. It is intended eventually to propose the establishment of a number (six or eight) of these small experiment stations, which will serve as seed depots for the colony for the maintenance and distribution of improved seed wheats suitable to the different localities and for intercolonial exchanges. In Gippsland two varieties of wheat tried this year have escaped the rust under unfavorable conditions and at Port Fairy about six varieties have escaped it. One of these latter Mr. Pearson took out of a sheaf which had the appear-

ance of being a sprout or variation, which was pronounced to be a remarkable wheat of high value. It is Mr. Pearson's intention to get several such varieties and distribute them systematically through the colony. He recommends that a record of the different wheats be kept, showing their past history and their behavior in the different districts from year to year, and that, as they begin to show signs of deterioration in one district, they be systematically transferred for reinvigoration to another.

G. W. GRIFFIN,
Consul.

UNITED STATES CONSULATE,
Sydney, March 23, 1891.

GERMAN EMIGRATION.

REPORT BY CONSUL-GENERAL EDWARDS, OF BERLIN.

Table showing the transmarine emigration from the German Empire by way of the German ports and Antwerp, Rotterdam, and Amsterdam in the year 1890.

Divisions.	Number.	Divisions.	Number.
Prussia:		Saxe-Coburg-Gotha	206
East Prussia	2,051	Anhalt	96
West Prussia	10,986	Schwarzburg-Sondershausen	118
Brandenburg (with Berlin)	4,214	Schwarzburg-Rudolstadt	94
Pomerania	8,382	Waldeck	83
Posen	11,241	Reuss (older line)	66
Silesia	2,246	Reuss (younger line)	206
Saxony	1,471	Schaumburg-Lippe	35
Schleswig-Holstein	3,917	Lippe	103
Hanover	5,929	Lübeck	77
Westphalia	2,356	Bremen	938
Hesse-Nassau	2,775	Hamburg	1,862
Rhenish Prussia	4,037	Alsace-Lorraine	923
Hohenzollern	97	Not specified	182
Total from Prussia	59,708	Total from the German Empire	91,925
Bavaria	9,725		
Saxony	2,577	1889	90,259
Würtemberg	5,987	1888	98,515
Baden	3,546	1887	99,712
Hesse	2,122	1886	79,875
Mecklenburg-Schwerin	1,133	1885	107,238
Saxe-Weimar	282	1884	143,586
Mecklenburg-Strelitz	198	1883	166,119
Oldenburg	1,001	1882	193,869
Brunswick	305	1881	210,547
Saxe-Meiningen	241	1880	106,190
Saxe-Altenburg	117		

W. H. EDWARDS,
Consul-General.

UNITED STATES CONSULATE-GENERAL,
Berlin, March 23, 1891.

AMERICAN PRODUCTS IN ITALY.

REPORT BY CONSUL-GENERAL BOURN, OF ROME.

In the spring of 1890 I was directed by the Department to inspect the various consulates of the United States in Italy. In the course of the inspection I had frequent occasion to talk with the consuls concerning the foreign trade of Italy, with especial reference to her commerce with the United States. This commerce has been gradually but steadily increasing during the past 10 years, until its volume is now exceeded in Europe only by Great Britain, Germany, and France. We buy, however, of Italy more than we sell her. I therefore made extended inquiries in every city that I visited during my tour of inspection, for the purpose of ascertaining why Italy does not take more of our products and how our merchants can increase their sales.

I found what seemed to me a singular condition. Every consul told me that American products bore a very high reputation in Italy, and that Italian merchants were favorably disposed to deal in them; but that comparatively a small amount of our manufactures were ever imported. They also said that the prices charged in the United States, with the moderate freight charges for ocean transportation, would allow very many more of our products to be sold here in competition with the products of England, Germany, France, Switzerland, and Austria-Hungary. Thus neither the quality of the goods, the disposition of the consumer, nor the price prevents us from selling more to Italy.

In order that the merchants of the United States might be informed of the situation and of the best means to avail themselves of it, I addressed, in November last, the following letter to each of our consuls in Italy, asking them to coöperate with me in the preparation of reports which should have for their aim to answer the question, "How can the sale of American products in Italy be increased?"

CONSULATE-GENERAL OF THE UNITED STATES,
Rome, November 22, 1890.

MR.———,
Consul of the United States at———.

SIR: In my recent visitation of the United States consulates in Italy I have had more or less conversation with each of our consuls concerning the reasons why Italy does not buy more of our goods and what means our merchants could adopt to increase Italian purchases. Several of the consuls have suggested that, if all our consuls in Italy would coöperate in sending to the Department at one time such suggestions as they may be able to make on this subject, the matter could be brought more forcibly to the attention of our merchants than has been done heretofore.

Although I am aware that the subject has been a great many times reported upon, still I venture to suggest that you send me within a short time, say by January 1, 1891, a short statement or report, giving your views, so that I may forward it with my own, exactly as you prepare it, to the Department.

In the conversations referred to many suggestions have been made to me which I consolidate here for your information.

(1) The reputation that American manufactures have in Italy on account of their intrinsic value in comparison with those from other countries.

(2) The counterfeiting of American goods, whether by imitating them in poorer qualities, stamping such as American, or by counterfeiting and imitating American labels.

(3) The kind of goods that could be sold here to advantage. Among those suggested are cotton cloths, yarns and threads, prints, gas and steam coal (bituminous, best quality), breadstuffs, groceries, canned goods, lard, petroleum, cotton-seed oil, builders' hardware, sewing machines, clocks and watches, steam-engines, edge tools, mechanical tools, stoves, lumber, plated ware, and table cutlery.

(4) The means to be employed for selling, whether by circulars, advertising, travelers, samples, or branch agencies or offices.

(5) The reasons why our sales to Italy have not been greater. Is it the prices, the quality, or the want of proper means for introducing?

If American goods have—as I think they do—the highest reputation in Italy, and if the prices for such as may be enumerated are no greater than other countries charge, is it not strange that Italy does not buy of the United States as much as she sells to them? And must not the reason be the lack of proper means to introduce the goods?

I offer these simply as suggestions, and I hope that you may feel like coöperating in the matter, even though you may have presented heretofore substantially the same views.

I am, etc.,

AUGUSTUS O. BOURN,
Consul-General.

I am very glad to say that in the conversations before referred to I found every consul fully alive to the importance of the subject, and that they have responded fully and ably in the exceedingly interesting reports which I transmit herewith.

The situation of Italy is exceedingly favorable to the development of trade with the United States. She has an abundance of good and accessible harbors; there are numerous steamers regularly plying between them and the United States, landing at Boston, New York, Philadelphia, Norfolk, New Orleans, and other ports. The frequency of this steam communication can be judged from the fact that from the single port of Messina 133 steamers cleared for the United States in 1890. Freight charges between the two countries are exceedingly moderate. In fact, transportation by water from New York must cost much less than it costs by railroad from many parts of Germany, Austria, and Switzerland to the central and southern part of Italy. The mail communication between the two countries is as perfect as it can be made. Every steamer leaving our shores and carrying an European mail brings letters to Italy. Letters are often received at Rome in 10 or 11 days from New York. Telegraphic communication is as perfect as in any part of the world, the rate from New York being but 7½ cents per word more than the rate to Great Britain.

Italy has a population of over 30,000,000, of which over 69 per cent. is directly employed in agriculture. She must, therefore, import largely of manufactured goods besides raw materials, and, to some extent, food supplies, for quite a proportion of her agricultural products are raised for export, such as wine, fruit, and silk. It is in one sense a new nation, though formed by a union of states that have a history from the most ancient times,

This new Italy is rapidly developing her resources. This development in turn produces increased wants, or wants for new articles not before in demand. A striking illustration of her increased wants may be seen in the imports of coal, which, from 516,000 tons in 1867, have grown to over 4,000,000 tons in 1890.

As I have before said, the Italians are well disposed towards American goods. In fact, one of the highest recommendations that a dealer can give to his goods is to call them "genuine American," especially if the article be cotton cloth or any kind of machinery. Large quantities of cheap goods, made to resemble American, are imported from Germany and Switzerland and retailed as "American." I saw in the show windows of an extensive dry goods house in Naples a large pile of cotton sheetings marked conspicuously "American Forte" (strong American), but folded so that the words in small letters, in one corner, "Manufactured in Manchester," did not show to the casual observer. In another city I saw a similar pile stamped in large letters "Genuine American, New York," and in one corner the small letters "Manchester." American petroleum is adulterated with Russian and the mixture sold as "genuine American," for no one who can afford to buy the American will use the Russian. Examples of imitation might be multiplied, but those given are sufficient for illustration.

American manufactures have the reputation of being always good. Italian merchants have been so often deceived in having goods sent them that are not equal to the representations that it is a common practice to require samples of purchases to be left as a guaranty that the articles delivered shall be of equal quality. Among European merchants the English have the highest reputation for faithfully executing orders according to the contract of sale. But there is no doubt that Americans have, if possible, even a higher reputation for honesty and straightforward dealings.

It should be evident to anyone who considers the foregoing that the reason why American products have not been sold to a greater extent in Italy is that the merchants of the United States have not made the proper exertions to sell. But that may not be entirely their fault, for they may have never directed their attention to the field.

There are, however, beyond this reasons that underlie the entire subject of our foreign commerce. The practical result of the undervaluations possible under the tariff laws of the United States down to the time when the new customs administration law went into effect, in August, 1890, has been to build up branches and representatives of European houses there to such an extent that Americans were driven from the field, and to concentrate almost our entire commerce with Europe in those branch houses or representatives of those whose chief interest did not consist in endeavoring to promote the use of American goods abroad. While our people are quick both to avail themselves of every possible improvement in production and to originate new and improved processes and machinery; while they have carried the subdivision of labor to such an extent as to reduce the cost of

production to the lowest possible sum; while they scour diligently every section of our own country by means of skillful and experienced commercial travelers in search of customers, they do not as yet seem to have paid special attention to the art of selling goods in competition with foreign nations.

I do not mean to say that all of our products can be so sold, but that there is a sufficient variety that can be sold to a large extent, if our merchants made the proper exertions, in the proper way, to sell. If we can sell 100 bales of cotton cloths in one country in competition with other nations, what reason is there why we can not sell, under the same conditions, cotton goods in other countries against the same competition?

As to the kind of products that can be sold to advantage in Italy, one has but to turn to the regularly published lists of our exports to Mexico, to Central and South America, and to Australia to gain a general idea of what can be sold to Italy. A market can be found there for the following American products, if the same means are taken to sell them that merchants of other nations employ: Lumber and staves; coal, both bituminous (best quality) and anthracite; grain, corn, flour, kerosene, lard, tallow candles, clocks, watches, stoves, wooden ware, agricultural implements and machinery, mechanical tools, machinery, steam-engines, water wheels, machine-made manufactures, organs, harmoniums, guns, pistols, plated ware, type, axes, edge tools, potted fish and meats, canned fruits and vegetables, cotton cloths, thread, yarns, and prints.

It will be noticed that none of the articles named are those whose cost is largely made up of labor. We can not expect to compete with Europe in anything in which labor forms an important item of cost; but where the machine takes the place of the hand labor we can successfully compete.

In order, however, to sell in competition with England, Germany, or the other nations of Europe, we must employ the same means that they use.

The foreign commerce of Italy is, in the north, carried on mostly by Italian houses, but in the south largely by English houses and German agencies. There are a great many English and German residents engaged in trade everywhere, but no Americans. The English send but few travelers, as they have had the market for many years and depend chiefly upon the established English houses and the reputation of their productions. The German manufacturers have representatives in all the chief cities and canvass thoroughly every part of Italy. They are well supplied with samples, understand thoroughly the language and the wants of the people, and are gradually supplanting other nations, not by reason of the superiority of their goods, but because of their constant and persistent drumming. They do not advertise; business here is not done that way; the merchants are only reached by personal solicitation.

The English, Swiss, or German manufacturer sells direct to the retailer. Competition is such that there is no room for the commission houses and other middlemen who, in the United States, must add their profits and expenses to the manufacturers' or producers' price before the articles reach

the retailer. Hence our products that pass through the hands of our commission houses and wholesale dealers, and thence through English or German houses on their way from the manufacturer to the retailer here, are burdened with so many charges that it is utterly impossible that they should be sold in competition with goods coming directly from the European manufacturer.

Americans do not give Italian merchants a chance to buy their goods. So little attention has been paid to the field that one can almost say that they have no travelers here and no samples. Occasionally circulars and advertisements in English are sent here, but they soon find their way into the wastebasket. Those few American houses which have thought it worth while to station representatives or to send skilled travelers here are slowly but steadily building up a profitable trade.

It would, no doubt, materially assist to introduce our products into Italy, if there could be exhibitions of them in several of the large cities. A number of American houses might, to save expense, join in providing suitable rooms, well stocked with samples of their manufactures, which should be in charge of some intelligent salesman who could explain and quote prices. But the chief reliance must be had on skillful commercial travelers who understand the language and the wants of the people and who would be quick to report to their employers what changes, if any, are required in styles or in modes of packing. The customs of the country must be followed. We can not expect to change them, but must endeavor simply to supply the wants of the people. Those houses will be most likely to succeed which establish branches in some central city, which should carry small stocks or be exceedingly well supplied with samples, and from which such travelers could be sent out regularly to every part of the country. Our merchants must not expect, however, that large sales will immediately follow the first attempts, but they may expect that with time and patience they may build up a large and profitable business.

The table herewith shows the value of the chief articles which must come from the United States:

Table showing the imports to Italy from the United States.

Articles.	Value.	Articles.	Value.
Fixed oils (not named)	$11,580	Skins, hides, and leather	$105,378
Petroleum	2,130,527	Iron and copper manufactures (including agricultural implements)	229,091
Heavy mineral and resinous oils	47,092	Instruments and chemical apparatus (in bronze)	112,326
Coffee	104,799	Coal	119,274
Pepper and pimento	13,510	Corn	212,300
Tobacco	3,042,569	Other vegetable products	17,949
Gums, resins, and gum resins	1,973,425	Salted intestines	16,791
Coloring extracts of woods	76,428	Fish, salt and fresh	367,665
Cotton	4,693,567	Lard and other fats	569,157
Wool	44,390		
Wood, boards, timber, and worked	489,834		

The question of how best to sell American products abroad is not a new one, neither is it the first time that our consuls in Italy have made substan-

tially the same representations that are now made in these reports. But at this particular time, when our people are looking so generally for an extension of their foreign commerce, it seems peculiarly appropriate that their attention should be called to this outlet for our surplus products.

AUGUSTUS O. BOURN,
Consul-General.

UNITED STATES CONSULATE-GENERAL,
Rome, February 14, 1891.

CATANIA.

REPORT BY CONSUL HEATH.

I would give it as my opinion "why Italy does not import more American goods" that it is entirely the fault of our merchants, and especially manufacturers.

Our merchants are the most enterprising in the world in buying foreign goods for our home markets, but as to introducing our manufactures in foreign countries, they are way behind other nations, notably the Germans and Swiss.

Italy being so near to Germany and Switzerland, manufacturing nations, and Austria and Russia, producing nations, it is small wonder that they supply all, or nearly all, her outside wants.

The effort of introducing American manufactured goods in Italy must come from the manufacturers themselves. To compete with the Swiss and Germans, they must sell directly to the Italian merchants. There is no room for a middleman.

American goods should find a large sale in Italy, but our manufacturers must supply the style and quality wanted in packages suitable to the trade, and not try to force unsuitable goods.

As an illustration of the folly of our cotton manufacturers in the export trade, I would cite a case which came under my own observation while a resident of Zanzibar some years ago. For possibly 25 years American cottons and prints had been and were the only salable goods of their kind for this large market. We had practically a monopoly of the trade, and as late as 1882 there were fifteen to twenty American vessels loaded with American cottons and oil for this port each year. To-day the trade is all in the hands of the German and Swiss manufacturers. Their mode of operation was this: They first studied the wants of the market, style and width of goods, sizes of packages, etc., made up samples of what they proposed to sell, and about 1880 or 1881 established direct agencies on commission in Zanzibar and captured the trade. The secret of their success was that the manufacturer dealt directly with the jobber through a resident agent. They sold any jobbing quantity wanted. The patterns were just what was wanted—large patterns and flaming colors—and, lastly, the width of the cloth and size of package were just what was needed. On the other hand, our manufacturers had always sold through a commission house (5 per cent. and expenses). The American merchant dealt with the commission house, but never with the manufacturer. He, of course, added his profit, which was generally more than 5 per cent., and on arrival of the goods in Zanzibar the cargo was sold to one buyer. Consequently, before the goods got to the merchant who retailed them, there were four profits: the mill's commission house, the merchant in America, his agent in Zanzibar, and the buyer of the cargo—at least 25 per cent. profit added to the manufacturer's net price before they reached the jobbing and retail merchant, against 2½ per cent. commission paid by the German and Swiss manufacturer. Not only was there a difference of, say, 22½ per cent. in placing the goods, but our American cottons and prints were not put up in suitable packages for the trade and had to be rehandled at large expense; also, the patterns were not popular or suitable.

Now, there is certainly a large trade in sight for American cottons and prints in Italy, and if our manufacturers wish to compete successfully for this trade they must first make the goods wanted, and, next, deal directly with the buyers in the most economical ways; there is no room for a mill agent or an American merchant. Otherwise, they can not get the trade now controlled by other European nations.

With direct and frequent steam communication between Italy and all our principal ports, including New York, Philadelphia, Boston, Baltimore, Charleston, and New Orleans, and many steamers returning to Italy in ballast for want of cargo, it would seem that Italy was a very promising country in which to push trade in such articles as cotton goods, wheat, corn, flour, cheese, oil, beef (live and salted), pork and lard, wooden wares, etc.

In fact, all kinds of produce and machine-made manufactures can be profitably sold here. Italy is a country of hand labor, where they even turn hubs for carriages and children's tops by hand.

Trade can only be carried on successfully by salesmen or agents on the spot. In all countries with a language foreign to our own it is slow work introducing goods.

As our merchants and manufacturers probably will not wake up to the benefit of trade with Italy this year any more than they have done the past 25 years, I would suggest that a bill be introduced in Congress allowing all consuls in Italy, who are so disposed, to represent American merchants and manufacturers on commission in the introduction of American products into Italy, and that a small appropriation be made—say $100 for each consulate—to pay the rent of sample room, as an experiment.

All consuls in Italy, excepting, perhaps, Palermo, have the time to devote to such work, and many would be glad to undertake it. As far as I am concerned, the work would be congenial, and I should hope for happy results.

Our magnificent trade with Australia has been built up largely by the shipping merchants engaged in the trade establishing sample rooms in the various Australian markets and bringing the Australian merchants and our manufacturers together.

The sample room is clearly what is needed in Italy, where the weights, measures, and language are so different from our own. And who is in a better position to claim the attention of merchants than the United States consuls?

If I could make a price for a steamer shipment of wheat or lard or lumber, and the price was favorable, there are at least twenty merchants in this city whom I see nearly every day who would gladly buy; but, not having the quotations and the trade being comparatively small, they buy, as of old, in England, Austria, or Prussia.

There are many goods sold in my district as American, but only petroleum is genuine.

CHARLES HEATH,
Consul.

UNITED STATES CONSULATE,
Catania, December 26, 1890.

FLORENCE.

REPORT BY CONSUL DILLER.

"Is it not strange that Italy does not buy of the United States as much as she sells to them?" This subject has frequently been alluded to by me in my several annual reports to the Department. I am glad to hear that it is your intention to make a special report on this important subject, embracing, with your own, the views of the different consuls under your jurisdiction, which can not fail to be of great interest to the manufacturers, merchants, and others in the United States. In this district several spasmodic attempts have been made to introduce American goods, with, I regret to say, little success, owing in a great measure to the inefficiency of the means employed and the character of the agents.

There is no reason why our manufactures should not find a ready sale in Italy, if properly introduced and their genuineness fully guarantied. Imitations are plentiful and trade-marks continually violated. This is the best evidence of their popularity, but, unfortunately, these imitations prejudice the sale of the genuine article; the innocent purchaser, being deceived thereby, is disposed to cry out against the so-called American goods.

There appears to me to be but one certain way to prevent such gross deception, and that is by the establishment of one or more grand depots for the sale and exhibition of genuine American goods under the auspices of men fully acquainted with the details of the business and competent to explain it in all its parts. These men should be familiar with the language, the habits, and the business customs of the people, and of irreproachable business character and integrity. From these central depots reliable agents should be sent through the Kingdom with samples, when possible, otherwise with circulars, in all cases guarantying the delivery of the goods in every respect equal to sample or description.

The kinds of goods which might be profitably introduced into Italy are cotton cloths, yarns, threads, prints, breadstuffs, groceries, canned goods, lard, petroleum, and cotton-seed oil; also, builders' hardware, sewing machines, clocks, watches, steam-engines, edge and mechanical tools, plated ware and table cutlery, all kinds of agricultural machines, farm implements, and wooden ware.

In addition to the above, I can see no reason why there should not be a large trade established in anthracite and bituminous coal. Nearly all the coal used in Italy is imported from England. Anthracite coal from the United States and used principally by foreigners in stoves is very scarce and dear, retailing at about $18 per ton. Ships returning could load with fruit and marble—sailing vessels could readily ballast with both kinds of coal, which would always find a ready sale in this market—and make a fair profit.

I have alluded to the means to be adopted in introducing our products; the next question is the points to be selected for the central depots. For agricultural and farming implements, either Milan or Bologna; and for other products, from its central position and important railroad connections, Florence presents many advantages.

In closing this communication, I desire to impress upon our countrymen that Italy is surrounded by manufacturing communities exceedingly alive to every opening for trade and quick to take any and every advantage to dispose of their products. This must be met by supplying better goods and at prices which will induce their purchase. There can be no question as to the popularity of American goods in this market in the few instances where they have been successfully introduced, and when their introduction is once fairly and permanently established there need be no fear as to the final result.

It now remains for our merchants and others interested to take the proper steps to introduce their products in the best manner, and your query, presented at the beginning of this report, will find its answer in a large increase of American products in Italy.

ISAAC R. DILLER,
Consul.

UNITED STATES CONSULATE,
Florence, December 18, 1890.

GENOA.

REPORT BY CONSUL FLETCHER.

Before entering into my subject I must state that I have answered questions of nearly the same nature, to the best of my ability, hundreds of times to as many merchants and manufacturers in the United States; but, as far as this consular district is concerned, I have yet to learn of any man among my correspondents who has acted on the hints given him.

As an introduction to my answers, it is best, perhaps, to make a few statements, as they have intimate bearings on the whole subject:

(1) The reputation of American manufactures in this section of Italy is second to no country in the world. Whether the goods are the output of the mine, of the factory, of the foundry, or the immediate products of the soil, the simple appellation, "American goods," is sufficient recommendation to insure purchasers, provided the merchandise is offered at prices within reasonable competition with similar goods from other countries. To-day American sewing machines lead all others. American clocks and watches have a good demand. Notwithstanding it costs more than the Russian brand, American petroleum is the choice of the people of Genoa. American flour is eagerly sought after. Captains of vessels entering this port from ports in the United States can readily dispose of any surplus salt meats, bacon, and hams to ship brokers, who in turn place the purchase in bond and sell later on at a handsome profit. In fine, American goods of every description, can be sold here, if our merchants and manufacturers would use one-quarter of the energy in introducing their wares abroad that they use at home.

(2) Much counterfeiting of American goods is carried on, but any person at all familiar with the genuine can readily detect the spurious article, for the latter is usually a bungling affair. Cutlery, clocks, stoves, lamps, plated ware, sewing machines, locks, etc., are counterfeited; but these articles are so unfinished that no one can be deceived by such shams except the most ignorant.

The word "counterfeiting" has not as grave meaning here as in the United States. The milder word "imitating" would apply, perhaps, better in this case. To the credit of the people of this district it must be said that they are not so much the transgressors in the matter of imitating, or counterfeiting, American goods as their neighbors of other nationalities, who bring their stock in trade here and offer it for sale as of American production.

(3) What goods of American manufacture can be sold to advantage here? may be asked. Two words will answer this question: all kinds, except, perhaps, heavy agricultural machinery. Lofty mountains, bold and barren, constitute about four-fifths of the area of this consular district.

American threads would be a blessing to the people here. The spool cotton sold in Genoa is, perhaps, the worst stuff ever offered for sale in any market in the world.

The lumber and stave trade could be largely increased, although these products of the American forests are well represented in this district; still, in the opinion of good business men here, the trade could be increased many fold by perseverance. Florida furnishes Genoa with many shiploads of lumber annually and New Orleans and Newport News with large quantities of staves.

About 1,494,000 tons of English coal were deposited in the port of Genoa during the year 1890. The best Cardiff coal sells at 30 francs per ton the year around and Newcastle at 25 francs per ton. Coke sells here at from 40 to 45 francs per ton. The average freight on coal per ton from Cardiff to Genoa throughout the year was 8*s.* 6*d.* and from Newcastle 7*s.* 6*d.* The above items may interest our coal merchants at home.

From personal knowledge I can make no comparison between American and English coal, but I have before me a copy of a dispatch sent to the Department under date of May 30, 1878, by Mr. O. M. Spencer, who was consul at this port at the time, in which dispatch the gentleman made the following comparisons:

"Two cargoes of anthracite coal have been shipped to this port by a Philadelphia company with a view of opening up a market for American coal, and the experiment, which at one time seemed likely to prove a failure, has been attended with the most gratifying effects. When this coal was first placed upon the market, the highest price bid first was only 22 francs per ton, an amount insufficient to cover the freight from New York. Subsequently, however, on its becoming known that it was well adapted for smelting purposes, the price at once advanced to 40 francs per ton, which covers original cost and freight and leaves a fair margin for profit."

Now here is a point worthy of consideration.

Mr. Spencer goes on to say:

"Heretofore English coke, which is selling at 60 francs per ton, has been used almost exclusively by Italian iron founders; but, as the American anthracite, after repeated experiments, gives equal, if not superior, results, there seems to be no reason why it should not supersede its English rival in the Italian market. It appears from reliable information that the amount of English coke consumed in the Mediterranean basin is over 200,000 tons annually, to say nothing of other European ports. For this trade the American anthracite bids fair to become a successful competitor, thereby furnishing a much needed outlet for the surplus production of our numerous coal fields."

In 1878 Genoa purchased of England 405,677 tons of coal, besides buying the two cargoes of American anthracite. Last year, as stated elsewhere, Genoa's purchase was about 1,494,000 tons, but not 1 ton of it came from the United States.

Ocean freights are lower to-day than in 1878, and the number of foundries has largely increased in this consular district within the past 12 years. If American coal showed such superior qualities for smelting purposes years ago, and it paid the owners a profit to sell it here, would not the same conditions hold good to-day, if tested? The demand is great for coal. Sarona alone, a seaport town in this province and about 20 miles from Genoa, purchased direct from England 435,690 tons last year.

Now, to the question presented at the commencement of this article, why Italy does not buy more American goods, etc.

Italians, like all other sensible business people, do not care to purchase what they have never seen; neither do they care to pay John more than they do James for about the same article. In other words, American manufacturers try to sell their goods in Genoa by circulars and by letters. English, French, German, and Austrian manufacturers do sell their wares, some through their traveling salesmen and others through regularly established local agencies. All have samples from which to select, except, perhaps, heavy hardware dealers. These facts transfer American circulars and letters to the waste basket, and, if sent by the wagonload, they would share the same fate.

Speaking on the subject to a prominent Genoese merchant a few days ago, he made this remark: "Your manufacturers must have a poor opinion of our business qualifications if they think we will send between 4,000 and 5,000 miles away for goods we only know of by hearsay and by circulars when we can purchase just what we require by samples before us. Those who send us circulars—at least many of them—instead of giving quotations, ask us to write for prices."

The above answers the first proposition of the question. Now for the second part, what means our merchants could adopt to increase their trade in this country (Italy).

In an able article on this subject, our consul-general at Frankfort answered this question under date of June 16, 1884 (CONSULAR REPORTS No 50, published February, 1885, pp. 247–249).

The following is the closing paragraph of Mr. Mason's report, from which his views may be easily gathered:

"When the same energy, persistence, and foresight which are now displayed in the manufacture of American goods are turned to the work of selling them, there will come the crisis of competition which Europe will have cause to dread. When American merchants establish permanent agencies in the new countries where Germany, France, and England are now competing for commercial advantages; when young men are sent to these agencies to learn the language and study the habits and wants of the people; when American goods are made, packed, marked, and in every way adapted to the peculiar notions and requirements of the people for whose use they are destined; and when the foreign service of the United States is placed upon the secure and sustained footing that has been found most advantageous by other nations, then it will be found that the people who have created a great nation within a century are merchants as well as manufacturers and farmers; that they know how to sell as well as create. There will then be heard far less than now of strikes and crises in American in-

dustry, and the United States will have taken the high and influential position as a commercial nation to which it is entitled by its unequaled resources and the energy, enterprise, and progressive spirit of its people."

I indorse every word in that report.

Italy is ripe for American merchandise of every kind; but she must see what she is purchasing. A syndicate of American manufacturers could be formed, and trusty men could be sent over here to display the merchandise. Even if only running expenses were the result of the first year's trial, the seed will be sown for future profits. There will be no trouble to find ships to transport the goods, although, unfortunately, there are only few vessels bearing the Stars and Stripes coming here.

The Phelps Brothers' fine line of steamers ply regularly between American and Italian ports; also the Anchor line. The Florio-Rubattino steamers are frequent visitors between New York and Genoa. English freight steamers come here loaded with cotton, petroleum, tobacco, and general cargoes from ports in the United States. Sailing vessels of nearly all nationalities come freighted to this port from the west Atlantic ports. One hundred and nine bills of health were issued last year from this office to vessels going to the United States. So, with these facts before them, our manufacturers can see that there need not be any uneasiness on the transportation question.

Permanent sample rooms or stores are what are needed here, with energetic men to run them. The owners of the merchandise must be content with smaller profits than at home.

JAMES FLETCHER,
Consul.

UNITED STATES CONSULATE,
Genoa, January 17, 1891.

LEGHORN.

REPORT BY CONSUL RICE.

Our consul-general at Rome has expressed a desire that all the consuls within his general jurisdiction should give their opinions concerning the best method of promoting and increasing the trade between Italy and the United States, at the same time furnishing statistical information concerning the amount of imports received at their different ports from the United States during the years 1888, 1889, and 1890, as also the exports during the same period. This request I have endeavored to carry out as far as within my power, as will be seen by the within tables; but I must beg the Department to bear in mind that the statistics for 1890 have not, up to date, been made up or rendered to anyone—not even in the office of the Italian custom-house—so that all the figures in this report for 1890 are taken from my own import and export books.

It is my opinion that the only hindrance to the establishment of a permanently profitable and ever-increasing import trade from the United States to this country is the great lack of proper means for introducing American goods to the Italian market, and, further, the want of knowledge as to the most suitable wares to import, with regard to the quality, make, and the tastes prevailing at the moment of doing business.

It appears to me that all these requirements can not be met, unless our merchants (as elsewhere stated) manifest greater interest in studying the requirements of the Italian consumer and more readiness to dispatch to this country competent representatives with powers to establish agencies, when advisable, to sell in gross or detail, and generally to diffuse amongst the Italians an acquaintance with American goods and a knowledge of their worth and utility.

I have endeavored, as far as possible, in a table annexed hereto, to set forth the values of the different items of imports from the United States to this port for the years 1888 and 1889, the latest statistics obtainable. Reference to this table will show that the total value of the

imports for the year 1888 was $1,521,033 and $1,988,369 in 1889, being an increase of $467,336, and that the most substantial item of the imports is tobacco, the value of which for the year 1888 was $1,065,066, while in 1889 the value of this commodity amounted to $1,671,159, or an increase of $606,093, a very considerable advance, though not in excess of what might have been expected.

Next in value comes petroleum, with $268,697 for 1888 and but $201,420 in the following year, that is to say, a decrease of $67,277, a result which may be explained to a certain extent by the fact of the establishment, within the period named, of a reservoir for the reception and storage of Russian petroleum. This tank is capable of containing something like 3,000 tons of oil. The reservoir has been constructed by Messrs. Nobel, of St. Petersburg, upon a site given by the municipality of Leghorn. The oil is conveyed in bulk to this cistern by means of tank ships direct from Batoum, and there is every reason to presume that the supply from this source will go on increasing, in which case a proportionate decrease in the shipments from America may be expected.

We have here an instance of the benefits likely to accrue to merchants who have sufficient acumen to perceive and seize upon any opening in an industry and sufficient enterprise to introduce methods better calculated to meet the requirements of any special trade. Workshops have also been established by Messrs. Nobel in connection with this reservoir for the manufacture of wooden boxes and tin cases, in which the oil is ultimately sent by land wherever a demand arises.

Of mineral oils other than petroleum, we see that the value of the imports for the year 1888 amounted to $75,080,000, while in 1889 no consignments whatever would appear to have been received at this port. This may be partially accounted for by the fact of large quantities having been acquired on favorable conditions with a view to profiting by an anticipated rise; therefore, we may look upon these figures as being rather the result of unnatural inflation during one year than as an extraordinary depression during another.

Here it might be as well to call attention to a fact which might otherwise appear rather unaccountable, viz, that where but little business is done the tabular values of different items imported are apt to show great variations between one year and another, owing to the very simple cause that a large number of the sums stated represent single shipments in some cases and in others consignments to individual firms. Where this is the case, it may be very readily supposed that a steady import can not be maintained and that considerable fluctuations must inevitably occur.

The next most important item in the table, and one which manifests a very unsatisfactory decline in the period embraced, is copper ore; but, on the other hand, there is a very appreciable increase in the value of copper and bronze imported during the same time.

Machinery shows a very marked falling off as regards the value of the quantity imported, which, during the year 1888, was $16,200 and no more than $4,500 in 1889; but, with regard to this latter, the decrease is no greater than might have been foreseen, having regard to the heavy duty imposed by the Italian customs tariff upon all machinery and iron and steel manufactures imported into the Kingdom, duties which, combined with bounties granted to shipbuilders, tend to make the construction of ships and their machinery particularly profitable in Italy.

The table of exports from Leghorn and Carrara during the years 1888–'90 shows that the value of the exports for 1888 was $1,738,851.22; that it had increased by $345,280.54 in 1889, viz, to a total of $2,084,131.76, which again had advanced by $321,675.40 in 1890 to the sum of $2,405,807.16. This increase, not being so large as that for the previous year, would lead us to infer that a tendency towards a more equitable ratio between the imports and exports is being gradually established.

It is not necessary to enumerate seriatim the different items of import and export, as a glance at the annexed tables will show their value, as far as it can be at present ascertained.

Here it may be as well to mention the opinion of an American resident in Leghorn, and one of its most influential merchants, upon the subject of increasing the American imports.

He says that questions put to him concerning particular articles of commerce can only be answered by dealers in such articles, and the demand for American manufactures has, up to the present, been very small. He adds that, when firms desire to place their goods upon the Leghorn market, "they must do as the English manufacturers do—send out their agents with samples, so that the Italians may learn how their goods compare in quality and price with products of other nations." He further adds that "the sales must be upon this footing alone, and not upon name or label," as he is impressed with the idea that the Italians are very favorably disposed to deal with Americans, but they must see the productions and test them.

This opinion precisely coincides with what I myself have stated elsewhere, and I may say that in the prosecution of inquiries as to the possibility of steps being taken to promote and establish an export trade to Italy it is the opinion of the majority of the most experienced men and those most directly interested in this species of trade that the only really efficient system, and one which at the same time would be conducive to permanent, sound, and lucrative commercial relations, is the method which has been adopted by most of the German and British exporting houses, and which long experience in their particular branches of trade has proved to be the most practicable. The system alluded to may be briefly set forth as follows: Each particular exporter sends a competent representative (a member of the firm or otherwise, according to circumstances), charged to carefully study the requirements of the foreign market, the prevailing tastes and necessities of the moment, and the prices at which certain articles can compete with domestic manufactures; he visits the principal industrial and other establishments in his particular line of business, and, after a careful and complete inspection, decides for himself where and how he can best dispose of his wares to the greatest advantage. It is thus alone that American merchants can succeed in disposing of their goods in the most desirable and lucrative manner and in securing themselves against keen and active competition, whilst manufacturers are saved from the possibility of loss and vexation by publicly exhibiting abroad (through a too superficial knowledge of the state of the foreign market) either inappropriate or new and popular goods with the result that the former would prove unsalable and the latter might be closely imitated before they themselves could take advantage of a favorable market. The exporter would then be enabled, by his intimate acquaintance with the state of the market, to maintain a constant supply of the goods which are most in demand and to keep it supplied to its fullest capacity, while at the same time carefully excluding those goods which would be unsuitable, and which, if exported, would only lead to loss and disappointment; whilst the success of the manufacturer is only made dependent (as it would be under any other system) upon his ability to compete with rival establishments at home and abroad. While I have assumed this system to be the most suitable for this district, I will not assert that it would be equally adapted for others; but it is evident that trade would receive a great impetus if only our merchants could be brought to rely more upon their own representatives and agencies here than upon any particular label or mark.

If American manufacturers would avail themselves more of reliable information, acquired through correspondents of their own sending, to ascertain the precise class of goods that are in demand at any particular times or places and to judge whether they could be produced and imported at a profit, the first steps in the right direction would then be taken and a gradually increasing import trade be established with this port.

The principal articles of import advisable would be tobacco and oils, as heretofore, supplemented by a greater supply of such items as machinery, agricultural implements, stoves and ranges, mechanical implements, edge tools, plated ware, table cutlery, groceries and canned goods, etc., in some of which no trade at all can be said to exist at present.

I do not stop to enumerate all the manufactures in which advantageous dealings might be established or simply augmented, as the case may be, but have briefly touched upon a few articles which, in my estimation, would be the most suitable and give the greatest return to our merchants.

And, in this connection, I must say that a vast field for future expansion of enterprise is open to manufacturers of certain of the items specified, for the reason that some of these

goods such as they obtain in America are almost entirely unknown here, whilst others, though not produced in Italy, are imported in comparatively small quantities, and would therefore sell the more readily, though not at present able to compete successfully with those of foreign manufacture on account of greater care and more experience having been brought to bear on these latter with regard to their suitability, quality, and make and the greater knowledge acquired as to the demand, which is a natural consequence and only what might be expected after a number of years of working up in any particular line of business.

As the Honorable Assistant Secretary is fully aware that reports of this nature entail considerable time and keep the consul himself and his clerical force worked up to their utmost limit of time, I have deemed it but an affair of simple justice and lenience to embody with this one the usual statistics sent in our annual résumé giving a statement of exports from Leghorn to all countries during the years 1888 and 1889 and a statement of imports received at Leghorn from all countries during the years 1888 and 1889, also tables showing the navigation at the port of Leghorn during the years 1888 and 1889, thus comprising in one report the requests of the honorable consul-general and the annual requirements of our Department. I do not do this with any wish or desire to shirk responsibility; but this office has a great deal more clerical and desk work than any other consular office in the Mediterranean, and the calls for reports are so frequent that if sufficient attention is paid to them the service must otherwise suffer.

IMPORTS AND EXPORTS AT LEGHORN.

Table showing the imports received at Leghorn from all countries during the years 1888 and 1889.

Articles.	1888.	1889.
Alcohol and other spirits	$18,651.33	$37,220.43
Acids	209,241.72	40,085.58
Beer	3,211.71	2,881.86
Biscuits	5,700.45	1,161.60
Books	8,351.49	4,425.87
Bran	11,837.65	7,433.03
Butter, fresh and salted	27,333.81	43,314.83
Cotton-seed oil	62,983.26	8,083.61
Coffee	356,491.07	328,870.84
Chicory	8,318.68	24,067.48
Confectionery and preserves	4,972.25	5,340.69
Cocoa	3,885.09	4,700.32
Chocolate	299.53	194.73
Cotton, raw	137,466.95	152,971.22
Copper, brass, and bronze	331,766.03	374,577.88
Coal	931,446.57	1,190,855.93
Cheese	26,947.04	26,672.20
Coral	67,631.06	85,128.44
Coins, gold and silver	364,889.66	330,628.30
Chemicals	26,860.19	51,035.18
Drugs and medicines	98,116.18	209,662.68
Dyes and paints	176,139.24	104,897.46
Earth and stones	64,986.42	89,027.92
Earthenware	7,620.82	6,773.91
Firearms	2,566.12	1,416.81
Fruits, fresh and dry	91,441.66	155,547.19
Fish, dry and preserved	1,361,550.70	1,481,863.91
Grain	1,365,676.23	2,507,721.18
Glassware	20,184.90	17,042.47
Grease and wax	90,229.62	163,724.39
Glue	6,196.61	5,029.77
Hair	12,804.39	73,437.85
Hides	590,523.15	543,955.06
Haberdashery	48,540.85	39,549.56
Iron and iron works	730,709.31	757,894.98

Table showing the imports received at Leghorn from all countries, etc.—Continued.

Articles.	1888.	1889.
India rubber	$15,232.13	$14,358.42
Lead	20,450.08	11,793.65
Mineral waters	6,737.05	4,451.71
Manufatcures of—		
Jute and hemp	202,597.11	198,398.01
Cotton	473,128.65	747,354.47
Wool	164,517.25	212,211.41
Silk	101,936.81	149,831.11
Machinery	120,101.39	442,078.46
Marble:—		
Wrought	1,649.76	2,241.69
Statues	8,098.18	7,929.36
Musical instruments	6,707.13	20,344.41
Manure	7,152.02	21,224.78
Oil:		
Olive	97,556.28	34,385.98
Mineral	392,608.26	354,934.14
Optical instruments	31,760.04	20,792.85
Oats	20,810.00	31,587.92
Paper	19,297.10	14,837.45
Sugar	60,257.33	138,984.89
Spices	43,641.61	57,922.81
Soap	2,875.89	9,768.50
Straw hats	9,587.66	17,947.64
Starch	12,661.57	8,612.04
Seeds	9,846.28	190,110.59
Tea	3,050.36	3,574.36
Tobacco:		
Leaf	1,459,333.60	1,710,430.65
Manufactured	1,606.33	1,754.94
Tin	49,286.98	32,138.55
Wine	8,197.67	2,637.73
Wool	214,662.51	467,174.61
Wood and utensils thereof	75,229.27	44,285.39
Watches and clocks	71,164.45	98,711.97
Zinc	27,990.79	35,329.61
Total	11,014,403.27	13,985,335.26

Table showing the imports at Leghorn from the United States for the years 1888 and 1889.

Articles.	1888.	1889.
Bicarbonate of soda	$250	.....
Cotton	14,500	.....
Cotton-seed oil	1,940	$6,760
Coffee	1,000	.....
Copper ore	33,000	.....
Copper and bronze	16,000	70,000
Corn	.....	24,560
Dyewoods	2,500	1,000
Extract of logwood	2,400	4,800
Furniture wood	2,500	600
Grain	2,500	.....
Greases	1,700	.....
Machinery	16,200	4,500
Mohair	1,500	.....
Mineral oils, other than petroleum	75,080	.....
Petroleum	268,697	201,420
Staves	1,200	2,700

Table showing the imports at Leghorn from the United States, etc.—Continued.

Articles.	1888.	1889.
Turpentine	$5,000	.....
Timber	8,000	$150
Tools	2,000	720
Tobacco	1,065,066	1,671,159
Total	1,521,033	1,988,369

Table showing the exports from Leghorn to all countries during the years 1888 and 1889.

Articles.	1888.	1889.
Acids	$128,077.53	$195,080.92
Alabaster, wrought	1,699.75	3,614.89
Alcohol	351.06	5,218.91
Animals, live	14,483.68	18,703.24
Books	5,976.63	8,905.59
Boots and shoes	7,489.19	10,745.27
Confectionery and preserves	365,306.34	568,585.91
Carriages and carts	1,785.25	4,128.07
Copper, brass, and bronze	45,307.90	8,711.05
Corn	25,871.26	.....
Cheese	11,078.58	34,744.82
Coral, manufactured	614,898.00	545,313.78
Drugs and medicines	330,241.77	630,645.22
Dyes and paints	25,561.30	8,084.70
Earths	50,911.82	69,349.91
Earthenware	17,150.94	29,326.50
Furniture	48,762,02	42,343.81
Fruits, fresh and dry	52,111.37	86,309.21
Flour	13,255.04	2,962.74
Fish, dry and preserved	32,711.01	158,748.67
Fine arts	45,371.59	85,750.07
Glassware	1,316.06	3,925.04
Glue	879.88	642.69
Haberdashery	3,103.05	4,566.18
Hemp, raw	506,171.09	633,974.14
Hair	1,127.12	6,859.99
Honey	22,576.94	13,961.42
Horns	.....	2,826.97
Iron	4,465.81	6,568.17
Jute	.....	565.10
Jewelry	555.64	1,245.62
Mineral waters	1,283.83	4,659.79
Manufactures of—		
Hemp and jute	100,312.94	157,185.67
Cotton	14,528.65	43,394.69
Wool	3,299.91	17,383.89
Silk	108,884.87	88,894.08
Mercury	230,967.66	379,372.43
Machinery	7,111.27	16,739.85
Marble:		
Wrought	69,865.03	141,034.94
Slabs	123,255.97	164,151.90
Tiles	.....	4,453.89
Statues	77,200.00	36,670.00
Marble and alabaster works	487,386.14	644,484.90
Meats and poultry	168,100.29	82,548.03
Musical instruments	1,776.17	1,905.87
Manure	1,553.33	1,683.92
Olive oil	490,827.95	846,308.66
Optical instruments	.....	1,198.53

Table showing the exports from Leghorn to all countries, etc.—Continued.

Articles.	1888.	1889.
Oats	$303.78	.....
Paper	24,382.65	$28,641.97
Rags	71,803.52	106,950.56
Rice	10,365.45	3,653.14
Spices	286.99	2,244.39
Soap	92,835.12	118,067.36
Straw hats	213,778.35	168,898.73
Skins	346,078.72	670,584.29
Seeds	33,448.44	29,201.68
Tobacco, manufactured	19,313.96	5,611.47
Wax	10,589.06	7,871.92
Wine	90,957.35	128,765.35
Wool, raw	33,022.94	50,503.66
Wood and utensils thereof	132,302.07	164,640.38
Total	5,354,420.03	7,304,114.52

Table showing exports from Leghorn and Carrara to the United States during the years 1888, 1889, and 1890.

Articles.	1888.	1889.	1890.
Alabaster works	$22,450.90	$19,357.58	$16,596.25
Argols	228,346.39	167,562.20	180,498.02
Aniseed	.....	.....	96.40
Boracic acid	25,276.10	40,555.90	30,377.42
Beans	30,337.18	23,219.61	102,154.73
Beeswax	2,760.99	519.29	5,431.97
Brier wood	9,723.20	16,474.95	20,103.77
Bitumen	.....	.....	1,022.59
Candied citrons	123,321.37	269,079.84	361,213.28
Cheese	4,201.06	19,035.19	21,674.58
Coral, manufactured	781.89	.....	.....
Cattle hair	264.32	186.41	916.73
Chalk	154.42	172.40	.....
Fruits, dry	19,127.53	5,576.06	7,634.91
Furniture	8,908.84	5,588.32	.....
Fine arts	.....	654.04	154.40
Glycerine	.....	1,041.84	1,926.02
Gentian root	1,357.76	.....	.....
Hemp	2,738.68	1,875.41	21,781.84
Iron ore	139,411.86	227,087.46	393,455.78
Juniper berries	12,424.78	5,335.18	3,660.48
Laurel:			
Leaves	866.61	42.52	838.74
Berries	406.81	473.06	.....
Macaroni	249.67	20.10	40.05
Marble:			
Block	341,158.57	390,414.41	404,191.31
Worked	23,498.31	26,997.42	20,293.47
Statuary	58,629.96	66,582.45	53,318.70
Slabs	108,538.38	118,165.29	101,636.85
Tiles	829.17	1,746.27	5,529.82
Olive oil	159,441.04	196,661.91	195,003.35
Orris root	15,534.89	11,226.45	28,564.47
Pumice:			
Stone	45,349.94	57,009.75	44,624.35
Bricks	242.82	278.58	464.90
Paintings	.....	.....	541.07
Rags	193,223.94	210,899.00	185,958.81

Table showing exports from Leghorn and Carrara to the United States, etc.—Continued.

Articles.	1888.	1889.	1890.
Soap	$123,350.56	$157,195.56	$149,689.12
Soap stock	1,996.95	5,392.48	417.10
Sienna earth	11,560.13	8,527.04	8,286.63
Seeds	425.48	3,625.50	1,565.86
Sausages	.....	.....	392.22
Talc	2,393.30	3,105.86	4,428.96
Tar	282.75	.....	.....
Umber earth	7,199.94	10,852.29	10,792.16
Wool	3,479.81	.....	.....
Wine	5,749.99	6,617.51	13,818.89
Miscellaneous	2,854.93	4,976.63	6,711.16
Total	1,738,851.22	2,084,131.76	2,405,807.16

NAVIGATION AT LEGHORN.

Table showing the navigation at the port of Leghorn for the years ended December 31, 1888 and 1889.

ENTERED.

Flag.	Steamers.		Sailing vessels.		Total.	
	No.	Tons.	No.	Tons.	No.	Tons.
1888.						
Austrian	7	2,949	3	2,254	10	5,203
British	329	322,839	20	4,175	349	327,014
Belgian	11	8,826	.....	.....	11	8,826
Danish	8	4,596	.....	.....	8	4,596
Dutch	30	22,980	1	142	31	23,122
French	243	87,176	2	167	245	87,343
German	31	33,365	1	505	32	33,870
Greek	7	4,040	7	1,916	14	5,956
Italian	1,231	678,881	1,081	83,750	2,312	762,631
Norwegian	6	3,602	5	1,998	11	5,600
Swedish	5	3,858	1	518	6	4,376
Spanish	4	5,535	6	850	10	6,385
Turkish	.....	.....	1	216	1	216
Tunisian	.....	.....	1	46	1	46
United States	.....	.....	1	331	1	331
Total	1,912	1,178,647	1,130	96,868	3,042	1,275,515
1889.						
Austrian	3	1,760	1	288	4	2,048
British	343	359,664	19	5,971	362	365,635
Belgian	15	14,558	.....	.....	15	15,558
Danish	6	4,438	6	966	12	5,404
Dutch	27	18,686	.....	.....	27	13,686
French	222	75,066	4	596	226	75,662
German	33	34,891	.....	.....	33	34,891
Greek	2	1,200	29	7,733	31	8,933
Italian	1,106	700,562	2,425	125,069	3,531	825,631
Norwegian	11	8,815	1	113	12	8,928
Russian	.....	.....	2	1,305	2	1,305
Spanish	1	976	6	779	7	1,755
Turkish	.....	.....	4	535	4	535
Swedish	5	3,551	.....	.....	5	3,551
Total	1,774	1,224,167	2,497	143,355	4,271	1,367,522

Table showing the navigation at the port of Leghorn, etc.—Continued.

CLEARED.

Flag.	Steamers.		Sailing vessels.		Total.	
	No.	Tons.	No.	Tons.	No.	Tons.
1888.						
Austrian	7	2,949	2	1,200	9	4,149
British	332	328,118	25	4,996	357	333,114
Belgian	11	8,826	.....	.....	11	8,826
Danish	8	4,596	.....	.....	8	4,596
Dutch	30	22,980	1	142	31	23,122
French	243	87,176	2	167	245	87,343
German	31	33,365	1	505	32	33,870
Greek	7	4,040	7	1,700	14	5,740
Italian	1,228	667,381	1,092	84,750	2,320	752,131
Norwegian	6	3,602	5	1,998	11	5,600
Swedish	5	3,858	.....	.....	5	3,858
Spanish	4	5,535	6	850	10	6,385
Turkish	.....	.....	1	216	1	216
Tunisian	.....	.....	1	46	1	46
United States	.....	.....	1	331	1	331
Total	1,912	1,172,426	1,144	96,901	3,056	1,269,327
1889.						
Austrian	3	1,760	2	425	5	2,185
British	345	360,063	18	5,119	363	365,182
Belgian	15	14,558	.....	.....	15	14,558
Danish	6	4,438	6	966	12	5,404
Dutch	27	18,686	.....	.....	27	18,686
French	222	75,066	4	596	226	75,662
German	33	34,891	.....	.....	33	34,891
Greek	2	1,200	27	7,031	29	8,231
Italian	1,102	698,402	2,401	124,011	3,503	822,413
Norwegian	11	8,815	1	113	12	8,928
Russian	.....	.....	2	1,305	2	1,305
Spanish	1	976	6	779	7	1,755
Turkish	.....	.....	4	535	4	535
Swedish	5	3,551	.....	.....	5	3,551
Total	1,772	1,222,406	2,471	140,880	4,243	1,363,286

WILLIAM T. RICE,
Consul.

UNITED STATES CONSULATE,
Leghorn, January 14, 1891.

MESSINA.

REPORT BY CONSUL JONES.

American goods, with but few exceptions (as petroleum, lard, and sewing machines), are unknown in this part of Sicily.

This district is mountainous and so rolling that plowing is out of the question, hence there is no local demand for improved agricultural labor-saving machines, in the production of which our country excels. All agricultural work is done by hand, and the land is devoted to the lemon, orange, fig, and nut trees. The peasants who tend these crops have few, if any, artificial wants, hence Messina has no back country to consume foreign importations, except

wheat and smoked or salt fish. American flour finds no sale; it is too dear for the Sicilian, who prefers to buy wheat in the Black Sea, landing it at the very doors of the steam and water flour mills that exist here and in Calabria. The Black Sea wheat turns out a flour inferior to ours, but cheaper.

Since 1880, when Messina ceased to be a free port, all merchandise entered at this port has been subject to the tariff existing for the whole Kingdom, and the imports from abroad of cotton textiles, as well as of many other articles, have greatly decreased, their place being taken by national industrial products. The latter, first, from being protected for a number of years by the premium on gold (1874 to 1883), and, secondly, by the increase in import duties, have developed rapidly and reached such a point as to successfully meet foreign competition, especially as concerns shirtings, homespuns, etc., which constitute the principal articles of consumption in Sicily. There is an establishment at Messina that produces prints, the calicoes used being imported from England, the duty on the same being comparatively light, and the printing is done at a very handsome profit. They have still much to learn in this art, but, as the great majority of the population seeks cheapness rather than quality, this establishment finds ready sale for its goods both in Sicily and on the mainland.

Of late years Germany has been slowly but surely supplanting England in the dry goods trade, furnishing inferior articles at slightly lower prices. The upper classes in Sicily, male and female, devote much time and attention to dress, and, essentially thrifty withal, they prefer saving a few cents per yard by buying an inferior article that will look well for 1 year (they rarely appear two seasons in the same costume) to paying a little more for a first-rate article that would last some 4 or 5 years.

American lard, although paying a Government duty of $5 per cwt. and a further *dazio-consumo* (communal) duty of $5 per cwt., brought from Genoa, is extensively sold here.

The importation of cotton-seed oil is prohibited by law. Chicago canned beef is occasionally to be found at the grocers', the foreign residents being its only patrons. The Sicilian finds it more economical to buy butchers' meat, because imported canned meats pay a heavy import duty and a heavy *dazio-consumo* tax.

With regard to the means to be employed for introducing American goods on this market, it is safe to say that circulars, advertisements, samples, and travelers are useless. If American goods are to be introduced here, it will be by means of branch agencies conducted by energetic men, speaking the language and acquainted with the wants of the people.

It seems strange that, of the 133 steamers (20 of which were Italian and 113 English) that touched at this port during the year 1890 on their way to the United States, not one should have brought American goods on their return. These steamers carry raw materials and products of the soil (sulphur, argols, wine lees, nuts, oranges, lemons, lemon juice, and essences) from Sicily to the United States, but, returning to Europe, they bring back cotton and grain to England, where they load with coal and general merchandise for the Mediterranean countries. Petroleum is the only American product imported directly (by sailing vessels) into Messina; although dearer than the Russian petroleum, it is much preferred.

Before long we may expect to see American fruit box shooks once more on this market, as, under the new tariff bill, the box containing the fruit, if made of American shooks, is admitted free of duty; otherwise, each box pays a duty of from 5 to 6 cents.

While goods of American manufacture have not as yet been introduced into this portion of Sicily, it is through the credits opened in favor of Messina shippers by merchants in the United States and the Messrs. Phelps, of New York and Liverpool, that the greater portion of the large orange and lemon crop tributary to this port is annually moved, such is the competition among fruit importers in the United States to control consignments.

WALLACE S. JONES,
Consul.

UNITED STATES CONSULATE,
Messina, January 10, 1891.

MILAN.

REPORT BY CONSUL PEPPER.

(1) The importation of American manufactures into this consular district is very insignificant, and it is equally true of other parts of Italy, though it is generally acknowledged that many American goods are superior in quality when compared with the same articles imported from other countries. The reason for this smallness of imports is partly explained in response to question No. 5.

(2) I have not heard that American goods are counterfeited by those made in Europe of an inferior quality or that American labels are also counterfeited.

(3) Of the American goods to be sold advantageously here, the following articles are likely to have a large sale: Cotton cloth, threads, prints, canned goods, petroleum, watches, clocks, leather cloth, sewing machines, and stoves. Hardware of various kinds is in great demand.

(4) The most effective method to secure profitable results would be in the establishment of American stores here in Milan and in the appointment of traveling agents furnished with samples. These commercial travelers would doubtless make permanent customers, who from time to time would inform him of the goods most salable.

(5) The Italians, like other people, buy their supplies in different places. With them, as with others, the principal thing is to buy where they can secure the cheapest rates. The question most essential for our people to consider is, can they compete with those of Europe? If they are able to do this, then there is no doubt but that American manufactures will be abundantly and profitably disposed of in Italy. However, I must invite your attention to this consideration—that it is not always the best article which is asked for, as it necessarily follows that such goods would be more expensive, therefore out of the market.

Such articles as letter cloth are imported from England and France. Let our American manufacturers produce a similar article of the same intrinsic value as that of these European competitors. If our business men can furnish a similar article for the same price, this will materially help their sale and make our goods very popular. There is one hindrance which must be remembered—the freight charges, which are higher for America than for Europe.

Can Americans compete with Messrs. Clark, Coats, and others in the article of show cotton?

I understand that India-rubber shoes made in our country have now a large sale here, because they are superior to those imported from France and Germany.

Lumber is brought to Italy from Canada. As we have an abundance of timber of every variety, fitted for every purpose, it might be as easily imported from the United States.

GEO. W. PEPPER,
Consul.

UNITED STATES CONSULATE,
Milan, December 13, 1890.

NAPLES.

REPORT BY CONSUL TWELLS.

In regard to hardware, it is necessary to state that Italy uses only an inferior quality, for the reason that consumers will not pay the price required for a superior article, and in consequence American goods of this class are but little known here; but I am of the opinion that if the opportunity were offered by which genuine American hardware could be obtained at a reasonable price large sales could be effected in Naples. The goods that are now sold as being American are for the most part mere imitations made in Germany, and, although cleverly

imitated, are of a very poor quality. These goods are introduced into Italy through the efforts of European commercial travelers, and are sold as of American manufacture, and so called and branded.

Agents for American houses are, I am sorry to say, seldom met with in Italy, and American goods do not come here directly, but through English and German houses established in London and Hamburg, and pass through so many hands before they reach this country that the price at which they are sold has to be largely increased to make up for the charges of the commission men through whom they pass. Indeed, it is said that the original price has to be nearly triplicated to cover this unnecessary expense.

Italy, I am informed, does not manufacture hardware, or, if so, to a very limited extent, and therefore is obliged to import everything used in that line principally from England, France, and Germany.

Only one or two American manufacturing companies have made an effort to establish a footing in this market, and it is strange they do not, for it is certain they could overcome the competition and secure a large and profitable trade if the goods were sent directly to an agent here, thus avoiding the commission at home and abroad, and having the work of canvassing done by an intelligent man speaking the Italian language. The question about price would be overcome as soon as the goods became known and appreciated, which would surely follow their proper introduction.

Agricultural implements, owing to their peculiar construction not easily imitated, are sold to some extent in Italy at the present time, but such only as can not be made in Europe. The reason why these goods, so highly appreciated by the progressive agriculturist, are not sent here more freely and in larger quantities is that until very recently no endeavor to develop a trade in this vicinity for them has been made. American plows are acknowledged to be superior to those made in Europe, not only for the better work they accomplish, but for their lightness and durability as well. A number of these plows were sold in the neighborhood of Naples during the past summer, and will no doubt eventually supersede all others in southern Italy, provided the right effort is made to bring them into notice and trials made in the field to demonstrate their superiority. There is a tax imposed by the Italian Government of 90 cents per 100 pounds on agricultural tools generally, but upon plows it is 70 cents per 100 pounds gross weight. This, I am informed, was done to protect a small foundry at Bercelli, where a few Italian plows are made. There are still great numbers of the antiquated wooden plows with a nail at the point used in this section of the Italian peninsula, but, if proper means were employed to sell a cheap but good plow made in the United States, they would soon be relegated to obscurity or broken up for firewood. American plated ware is unknown here, but purchasers could be found for it if proper inducements energetically presented were resorted to to influence the minds of the people and prove to them its superiority and durability, and the same may be said with regard to table cutlery.

A paying market and a large trade could be opened in this consular district and the adjoining one for American canned goods, especially meats and lard. Meat is very expensive in Naples, costing about 20 cents per pound, and in many of the towns in the interior of the country it is impossible to procure it oftener than once or twice a month even at that price. Therefore, if these very desirable products of the United States were intelligently and energetically introduced, a valuable trade in them could in a short time be built up.

Lumber, to some extent, is imported from the United States, but is controlled by one or two Italian merchants, who have agents there who ship it directly to Naples. This trade, also, could be very much increased and made profitable under right conditions. Brooks and Coates cottons are very popular and meet with large and ready sale in this city.

Refined petroleum comes here in large quantities and is universally consumed. It comes in bulk and in tin cans containing 5 to 10 gallons each.

In my opinion there is no reason why the United States should not largely export the products of her mills and her manufactories, as well as those of her mines or wells, cotton, cereals, etc., and compete successfully in the open markets of the world with other countries.

It is an acknowledged fact that certain kinds of goods made within the bounds of the United States have a reputation the world over for their preëminence above those of a similar character made elsewhere.

JOHN STEELE TWELLS,
Consul.

UNITED STATES CONSULATE.
Naples, December 17, 1891.

PALERMO.

REPORT BY CONSUL CARROLL.

Your dispatch of November last reached this consulate early in December, and would have received prompt attention but for the uncertainty of my tenure, as I was then, as now, daily expecting to turn the office over to Mr. Pugh, the return of whose exequatur from the court of appeals is momentarily expected.

In brief, however, I may now say that almost every article of American manufacture could, with proper efforts, find a ready and continuous sale here. The most efficacious mode of procedure with this view would be for manufacturers and dealers in American goods to send representatives here conversant with the language, with samples and price lists, with the power to sell or take orders upon the same basis as English, German, and other countries do, that is, from 3 to 6 months' credit. American manufactures are recognized to be the best in the world. They are said, however, to be too good and costly for this market, but this objection could be obviated by the means above suggested. The agents or representatives of American firms sent here could study the articles and character thereof required and have them manufactured accordingly.

So-called American manufactures are sold here as the production of American firms in Germany, England, etc. This is simply a swindle, as no American firm in any country would turn out such goods. I know of no counterfeiting of labels.

The articles which would find the most ready sale here are watches, clocks, cotton goods, lard, stoves, edge tools, etc., and, indeed, all, or nearly all, the goods enumerated in your question No. 3, many of which have had a market here for some time.

PHILIP CARROLL,
Consul.

UNITED STATES CONSULATE,
Palermo, January 10, 1891.

TURIN.

REPORT BY VICE-CONSUL TOUHAY.

American goods enjoy a high reputation for excellence of manufacture and durability. Such of them as appear for sale in this city (with the exception of petroleum) are almost always purchased through British agencies, and this alone is sufficient to enhance the cost, so that they enter, when genuine, in very small quantities. There are German imitators of American hardware to be seen in almost every store in Turin, but these imitations are of such poor material and workmanship that, passing as they do for our manufacture, they are more apt to throw discredit than not upon our goods. This is notably the case with regard to stoves, sewing machines, and house-furnishing goods.

Prompt sales would probably be obtained for folding chairs, silver-plated ware, toys, matches, gas stoves for cooking and heating, petroleum lamps, small machinery, and notions. Door locks, house-builders' hardware, and gas fixtures would, in my opinion, if offered at reasonable prices, meet with favor, as such articles in use here are of the poorest quality and excessively dear.

This district is overrun twice a year by German and English drummers, who thoroughly canvass the city, and who, I am informed, accomplish quite important sales. The houses represented by these drummers accord liberal terms of credit, ranging from periods of 3 to 6, and sometimes even 12, months. This practice is the rule, and it must be presumed to be profitable to both sellers and buyers, as it has been in successful force now for several years.

It is of little or no use for our manufacturers to send either advertisements or circulars. In the first place, they are almost always in English, and in the next, even if they were published in the language of the country, people here would take very little stock in them. The Piedmontese have the vaguest ideas of American geography, and Buenos Ayres or Boston has about the same local signification to them. A mere printed announcement that goods of admirable quality and at low prices are procurable from the United States has no more effect on their intelligence than if the same were said of the moon. The Germans are especially well aware of this, and, as they want to sell their goods, they send agents all over the country well supplied with samples, and on the showing of said samples they have almost monopolized the market for their manufactures.

This city has a population of over 300,000 and is the great distributing point for all Piedmont. There is considerable wealth in the district, and I am convinced that, were one or two American agencies established here with a fair show of samples of American goods, a most lucrative trade would soon grow into existence.

In conclusion, I may add that our cotton textiles, prints, and cloths, from their excellent quality and freedom from dressing, would be sure to find especial favor.

ST. L. A. TOUHAY,
Vice-Consul.

UNITED STATES CONSULATE,
Turin, January 27, 1891.

VENICE.

REPORT BY CONSUL JOHNSON.

Owing to the comparatively few attempts that have been made in Venice to introduce American merchandise, resulting from the limited demand for goods of the class heretofore exported from the United States, it is difficult to find reliable data upon which to base opinions as to the advantages of attempting their introduction.

From rather a general survey of the question it would seem that the only element considered by the purchasers of this section of Italy was the price of the article for sale, utterly regardless of its quality, so that, notwithstanding the superior reputation that American wares hold in all markets of the world, in this they could without difficulty be driven out by cheap and inferior imitations.

Venice is not a direct importer of any American articles and, with the exception of small cargoes of petroleum now and then, gets what articles of American production it may find advisable to have from other Italian markets.

Although I am confident that whatever product of American manufacture could be introduced would be counterfeited and imitated, I only know of one instance of the fact, and that in the case of American clocks, the counterfeiters being German manufacturers.

The best means for introducing and selling American goods advantageously would be, in my opinion, to have established in the most important commercial cities of Italy large depots or bazaars for the sale of importations exclusively American, where, as a matter of course, sales would be solicited at the smallest possible profit. Depending upon and receiving goods from the main house, branch bazaars should be established in the smaller and less important Italian towns. This method, in my judgement, seems to be the only practicable one for regularly introducing on a fair basis American wares into this country, more especially since just now the system of bazaars with fixed prices seems to be particularly popular with the Italians.

The main reasons for the failure to make larger sales of American goods are, first, prices and, secondly, the lack of proper means adopted for placing on the market.

There also seems, on the part of American manufacturers, an unwillingness to accord a fair amount of credit to those who might introduce their goods in this country and to exact conditions which are not demanded generally by the commercial usages of this nation.

As an instance of this, I may mention the case of the manufacture of a certain typewriter which has been sold extensively in the United States and which could, without doubt, be sold advantageously in this part of the world. The firm referred to found a good business man in this district and by letter agreed to give him their agency for Italy. The agent incurred considerable expense and consumed a large amount of valuable time, feeling confident of the successful sale of the goods, and upon sending an order for a certain quantity of the goods to have on hand (as naturally to sell to advantage the goods must be on hand ready to deliver on receipt of or before payment) received the reply that in case of orders from an agent abroad no order was filled unless accompanied by cash. I may say here that the amount of this order was not more than $300. Such conditions are altogether contrary to the methods of doing business in this district, and I am certain would in no case be accepted by agents here, as people here are not in the habit of paying the cost of their purchases 1½ months before delivery.

If the intentions of our merchants and manufacturers can be judged by the methods of those who have come under my personal observation, it seems quite evident that their desire to introduce their goods in this country is not very ardent, in which case it would appear that consular coöperation in the matter is vain and delusive, as, with all the desire possible on the part of the consuls, if our merchants are so decidedly opposed to offering any advantages or taking any risks, little can be done to assist matters.

H. ABERT JOHNSON,
Consul.

UNITED STATES CONSULATE,
Venice, February 11, 1891.

COMMERCE OF BOMBAY.

REPORT BY CONSUL BALLANTINE.

GENERAL EXPORTS.

Among commodities of native production there was an increase of 244¼ lacs rupees* in the value of shipments of raw cotton, bringing it up to 1,455¾ lacs rupees, or two-fifths of the whole export trade in native produce. The increase was in great measure due to the excellence of the crop. Complaints continued as to the adulteration of this material. The exports of cotton twist and yarn, seeds, and raw wool also showed marked improvement. The first-named commodity was largely in demand in Japan and the China ports. The increased exports of seeds were due to the failure of the rape seed crop in Germany. The improved trade in raw wool was the result of a good demand in the United Kingdom. The exports of grain and pulse, cotton piece goods, drugs, medicines, and narcotics, and gums and resins showed a falling off, which, in the case of the first-named commodity, amounted to 216⅝ lacs rupees. The decrease in exports of grain and pulse was due to smaller shipments of wheat, a consequence of good wheat crops in Europe. The China treaty ports took cotton twist and yarn in preference to cotton piece goods, for which there had previously been a growing de-

* 1 lac rupee = 100,000 rupees; 1 rupee = 40.4 cents.

mand in those ports. Among articles of foreign merchandise the largest export trade continued to be in foreign piece goods. The countries with which the export trade was largest were the United Kingdom, China, France, Belgium, Italy, and Austria, in the order given.

Cotton.—The extent of this trade depends upon the size of the crop. The outturn for the year 1889 was good, and this led to large exports in April and May, which are generally the two principal months for cotton shipments. The crops of 1890 were also large, and a good business was done up to March 31 last. Complaints are rife regarding the constant increase in adulteration, which threatens to ruin the quality of the finer descriptions of this staple product. The United Kingdom, Belgium, France, Germany, and Italy took more cotton by 46,765, 2,494, 14,809, 75,985, and 49,226 bales, respectively, while the exports to Austria fell off by 7,230 bales. The following table shows the number of bales exported to principal countries from 1887–'88 to 1889–'90:

Countries.	1887–'88.	1888–'89.	1889–'90.
	Bales.	*Bales.*	*Bales.*
United Kingdom	380,510	338,666	385,431
Belgium	169,892	227,667	230,161
France	114,530	139,011	153,820
Germany	10,710	28,518	104,503
Italy	171,724	190,067	239,293
Austria	182,960	205,822	198,592

Grain and pulse.—Wheat is the principal item coming under this head. The exports of it show a value of 23,126,654 rupees, against 47,649,988 rupees in the previous year, a decrease of 24,523,334 rupees. This large decline is attributed to the abundant crops in the United Kingdom and other countries in Europe. The largest fall appears in exports to the United Kingdom, which show a smaller value by 9,748,125 rupees, while France, Italy, and Belgium received less by 7,289,003 rupees, 3,016,744 rupees, and 2,232,338 rupees, respectively.

Table showing the wheat exports.

Countries.	1887–'88.	1888–'89.	1889–'90.
	Cwts.	*Cwts.*	*Cwts.*
United Kingdom	2,020,511	4,831,166	2,821,283
France	2,272,680	2,735,901	1,001,063
Italy	2,778,372	1,118,852	403,246
Belgium	488,193	914,232	386,337

Seeds.—The improvement is due to increased exports of rape seed having been made to meet the demand in Europe consequent on the failure of the German crop.

There was a decline in linseed of 4,049,745 rupees, which was entirely owing to the shortness of the crop. The high prices ruling during several months of the year probably brought out all the supplies available for export.

The increase in exports of rape seed amounted in value to 2,580,759 rupees. The crop does not appear to have been abnormal, but the higher prices offered in the European markets, on account of the failure of crops above referred to, led to a good export business in Bombay.

Gingelly.—Exports of gingelly show an improvement in value of 1,536,450 rupees, which is attributed to a good crop. France took over half of the total shipments and more than in the previous year by 501,884 rupees; Italy also received more by 939,460 rupees.

Wool (raw).—This trade expanded considerably during the past 12 months, and shipments increased in value by 1,148,378 rupees. A good demand in the United Kingdom and the higher prices offered seem to have led to the improvement in the trade. Nearly the whole of the exports were to the United Kingdom.

The following table shows the description and value of the principal articles exported to foreign countries in 1889–'90:

Articles.	Value.	Articles.	Value.
Indian produce.	*Rupees.*	*Indian produce*—Continued.	*Rupees.*
Coffee	1,478,231	Other articles	5,015,255
Coir manufactures	521,127	Total Indian produce	358,628,749
Cotton:		*Foreign merchandise.*	
Raw	145,272,791	Coffee	96,468
Twist and yarn	53,731,094	Cotton:	
Piece goods	5,630,385	Twist and yarn	834,456
Drugs, medicines, and narcotics, including opium and tobacco	38,135,833	Piece goods	16,253,292
Dyeing and tanning materials, including cutch and gambier and lac dye	4,063,608	Fruits and vegetables (cocoanut kernel)	146,861
Grain and pulse	30,820,926	Gums and resins, excluding cutch and gambier	731,404
Gums and resins, excluding cutch and gambier	1,100,559	Ivory, manufactured	1,255,426
Hemp, raw	466,650	Jewelry	193,057
Hides and skins	5,132,983	Metals:	
Horns	1,097,609	Copper, wrought	591,132
Jewelry, etc	197,277	Iron, old (for remanufacture)	485,834
Jute manufactures (gunny bags)	431,024	Tin, unwrought	167,567
Manures	949,415	Oil (kerosene)	66,431
Oils	333,752	Provisions	1,230,799
Oil cake	214,519	Silk:	
Provisions	3,783,342	Raw	332,871
Seeds	48,600,139	Manufactures	551,971
Silk manufactures (piece goods, including mixed goods)	374,486	Spices (cloves)	978,739
Spices	1,318,211	Sugar, refined	2,637,602
Tea	789,915	Tea	1,677,945
Wood, ornamental (sandal)	436,397	Wool:	
Wool:		Raw	2,497,932
Raw	8,148,966	Manufactures	465,480
Manufactures (shawls)	284,255	Other articles	4,244,972
		Total foreign merchandise	35,440,239

IMPORTS.

The import trade in cotton piece goods amounted in value to 803½ lacs rupees and exceeded the import trade in any other commodity, though its value was less by 26¾ lacs rupees than in the previous year. The in-

creased imports of machinery and mill gear were due to the extension of mills in Bombay. The imports of copper increased, owing to the fall in price consequent on the collapse of the Paris syndicate. The increase in imports of sugar was due to the stocks imported in the previous year having run short. A good crop in Persia accounted for the larger imports of raw cotton, as did, in a great measure, a large production in China for more extensive imports of raw silk. Besides cotton piece goods, there was a falling off in the imports of coal, iron, railway stock, and rolling plant. The reduced imports of coal were chiefly due to a large stock having accumulated in this country. The imports of iron fell off, owing to a rise in the price of the commodity. The fact that less railway construction was going on accounted for the decrease in the imports of railway stock. The countries with which the import trade was largest were the United Kingdom and China, and more than two-thirds of the whole import trade was with the former of these.

Kerosene.—Kerosene constitutes nearly the whole of this trade, the quantity imported being 13,704,072 gallons, against 11,930,739 gallons in the previous year. The cheapness of this oil is the cause of the almost yearly increase in the demand, and it is rapidly replacing all illuminants produced locally. Below is a table giving receipts of kerosene from Batoum and the United States during the past few years:

Years.	Batoum.	United States.
	Gallons.	*Gallons.*
1886–'87	1,481,232	5,871,588
1887–'88	2,193,877	2,315,287
1888–'89	9,717,773	2,212,212
1889–'90	10,742,344	2,961,728

Provisions.—There was an improvement of 506,986 rupees, due, in a large measure, to increased consignments of dates from Turkey in Asia and Maskat. Fish maws and shark fins were also imported in larger quantities from Maskat, as well as dried fruits from Persia.

Raw cotton.—Imports of raw cotton are valued at 2,668,868 rupees, against 1,505,029 rupees in the previous year. Persia supplies nearly the whole of this product, and the increase visible is attributed to large crops.

Spirits.—The receipts of whisky, which fell off considerably in 1888–'89, showed an increase of 14,302 gallons. The imports of brandy diminished by 3,915 gallons, while rum and gin both improved, the former by 1,575 gallons and the latter by 857 gallons. Whisky is imported almost entirely from the United Kingdom, brandy chiefly from France, rum from Mauritius and the United Kingdom, and gin from the United Kingdom, Holland, and Belgium.

H. BALLANTINE,
Consul.

UNITED STATES CONSULATE,
Bombay, January 31, 1891.

BARCELONA IN 1890.

REPORT BY CONSUL BOWEN.

The year 1890 was a conservative, in contradistinction to a speculative, year in the province of Barcelona. As early as the month of January the opinion obtained among employers that strikes of a serious nature would occur on or about the 1st of May, and by that opinion they were largely governed in determining what obligations they would assume. Nor was their prudence fatuous; the strikes were, indeed, serious, for they did not culminate until July 23 and were not settled until August 2, and in the meantime they were maintained in no fewer than nineteen different manufacturing towns.

But even more potent than the strikes were in affecting trade was the presence of the cholera along this coast of Spain. From the middle of May until the middle of November it not only caused many deaths, but it prevented buyers and travelers, and also natives of other parts of Spain, from visiting the infected districts. Hardly had the cholera disappeared when the financial troubles in South America and in London occurred and produced a disquieting effect on the capitalists and banks here that lasted until nearly the end of the year.

The following table shows the exports declared at this consulate for the United States during the year 1890:

Articles.	Quarter ended—				Total.
	March 31.	June 30.	September 30.	December 31.	
Anisette	$66.00				$66.00
Antiquities	200.00				200.00
Books	234.00				234.00
Cards	213.00	$839.80	$102.60	$717.55	1,872.95
Ceramics		93.60			93.60
Cigarette paper	758.00	1,945.00	556.40		3,260.40
Cork	77,261.00	58,165.00	4,225.06		139,651.00
Cork mats		270.60	15.68		286.28
Glycerine		9,940.40	19,796.80	40,058.00	67,795.20
Garlic			1,136.18	40.36	1,176.54
Hand organs	220.00				220.00
Jackasses		17,500.00	11,176.00		28,676.00
Mineral water	3,995.00	2,138.00	2,058.00	1,705.07	9,896.07
Mosaics		90.00			90.00
Oil painting		185.00			185.00
Olive oil		42.06			42.06
Pasteboard mats			300.00		300.00
Saffron			497.32		497.32
Skins		396.00			396.00
Tartar		4,330.24			4,330.24
Wine	2,527.50	4,618.40	5,404.71	1,448.80	13,999.41
Wool (dirty black)			1,760.00		1,760.00
Sundries	79.00				79.00
Total	85,553.50	100,555.10	47,028.69	43,969.78	277,107.07

According to the customs returns, the trade of Barcelona with the United States in 1890 was as follows:

Articles.	Imports.		Exports.	
	Quantity.	Value.	Quantity.	Value.
Anisette.....litres...	.....	.....	234	$45
Bacon and lard.....kilogrammes...	27,261	$6,052	.....	.....
Blacking, inks, colors.....do.....	2,677	655	.....	.....
Caoutchouc.....do.....	1,964	2,085	.....	.....
Cartridges.....do.....	665	161	.....	.....
Cerosin.....do.....	9,672	2,522	.....	.....
Chemical products.....do.....	5,529	1,061	.....	.....
Cigarette paper.....do.....	.....	.....	7,036	4,074
Cotton.....do.....	35,069,271	9,500,035	.....	.....
Cotton-seed oil.....do.....	19,662	2,274	.....	.....
Drugs.....do.....	1,779	429	.....	.....
Firearms (revolvers, carbines, etc.).....do.....	76	337	.....	.....
Garlic.....do.....	.....	.....	6,570	913
Indigo.....do.....	5,124	11,442	.....	.....
Lubricating oil.....do.....	37,792	2,899	.....	.....
Mineral coal.....tons...	875	4,222	.....	.....
Motors.....kilogrammes...	101,204	23,484	.....	.....
Pitch-pine wood.....cubic metres...	13,931	144,430	.....	.....
Perfumery.....kilogrammes...	908	1,402	.....	.....
Petroleum.....do.....	3,698,562	170,363	.....	.....
Pills and other pharmaceutical products.....do.....	5,926	6,511	.....	.....
Preserved fish.....do.....	2,283	2,203	.....	.....
Paper and prints.....do.....	11,516	7,446	393	227
Resin.....do.....	2,448,472	47,255	.....	.....
Staves.....number...	1,295,230	238,831	.....	.....
Tallow.....kilogrammes...	570,433	82,570	.....	.....
Toys.....do.....	790	915	.....	.....
Tripe (guts).....do.....	47,058	18,164	.....	.....
Tramway cars.....do.....	209,028	43,570	.....	.....
Varnish.....	.....	341	.....	.....
Wine.....	.....	.....	.....	1,781
Various.....	.....	1,802	.....	727
Playing cards.....	.....	.....	.....	1,911
Total.....	.....	10,323,461	.....	8,728

Almost all the articles of importation and exportation between Spain and the United States pass through other countries, and are consequently enumerated among the articles of importation and exportation between Spain and said other countries, and not between Spain and the United States. According to the foregoing figures, obtained from the custom-house, the direct and known exportations to the United States from Barcelona amounted to but $8,728 during the year 1890, while, as a matter of fact, the amount was $277,107.07, as is shown in the foregoing return of declared exports.

HERBERT W. BOWEN,
Consul.

UNITED STATES CONSULATE,
Barcelona, March 6, 1891.

MILK FROM TUBERCULOUS COWS.

REPORT BY CONSUL RYDER, OF COPENHAGEN.

Experiments have again been resumed in this country towards elucidating the still open question whether milk from tubercular diseased cows, even in such cases where the udder was not affected with tuberculosis, can be the means of communicating infection. In these experiments the investigation was made in all with the milk from twenty-one diseased cows, and with which forty guinea pigs were inoculated. It had been intended that two guinea pigs should be inoculated from each sample; but in two cases, owing to the number of these animals having fallen short, only one guinea pig could be employed, from 2 to 3 centimetres of milk being used on each occasion. The milk samples were taken by the veterinary surgeon of the cattle market, the cows being milked by him and the milk caught up into small bottles. The veterinarian only selected such cows as, on examination during life, could be classed by him as suffering in a high degree from tuberculosis; and in every case the udder and chest intestines of the animals were afterwards sent in for examination, so as to obtain full assurance of the correctness of the diagnosis, as well as to ascertain the extent of development of the disease. The inoculated guinea pigs were kept in isolated cages in such manner that only the two which had received milk from the same cow came into contact the one with the other. Three of the guinea pigs were killed by rats, fortunately, however, at such distance of time (24 or 25 days) after inoculation that the inoculated tuberculosis must have shown itself had it been present. Two others died of casual (not tuberculous lung) disease after the lapse of 1½ and 2 months, leaving no sign whatever of tuberculosis.

The results obtained from these inoculations have been that milk from seventeen of the examined cows had no influence in producing tuberculosis in the guinea pigs, whilst the milk from four of the cows showed itself to be communicative of infection; but in three of these cases, on examination of the udder most minutely, this could scarcely be considered in a perfectly sound state. In the one case two small tumors were found of about the size of a pea; in the two others, of the size of a hazelnut; but in all the cases, with a slight hardening of the tissues in a somewhat extended circuit. When the above-mentioned tumors were cut over, they presented the exact appearance of a fresh tubercular udder inflammation, that is to say, the gland lobes were swollen, firm, and of grayish color, slightly translucent, and with yellow streaks corresponding with the lacteal passages. In dried preparations of tissue from the tumors, as well as from the infiltrated regions, tubercle bacilli could be demonstrated, and sections showed on both sides the presence of typical tuberculous tissue with giant cells containing bacilli. Thus there could be no doubt but that in all three cases a commencement of tuberculosis had to be contended with. The slighter the development of the tubercular attacks in the udder, so much the fewer will be the number of bacilli thrown off from

the milk. In full agreement with this it was found that, of the two inoculated guinea pigs, only one was attacked in the case where but two small tumors of a pea size was found in the udder. The other guinea pig was killed 4 weeks after the inoculation and was found to be perfectly sound. In the last of the four cases, where the milk was found communicative of infection, no discernible tubercular attack was to be detected in the udder. This case, however, differed in some degree from the others. The cow in question died of tuberculosis of chronic character and in a very advanced stage, several of the organs having been attacked (the lungs, pleura, mesenteric glands, liver, and intestines), whilst the other cows whose milk had been examined had all been slaughtered. With these the attack had not reached the extreme stage, although in many of them it was found to be far advanced.

Whilst this case would thus seem to prove that the tubercle bacilli can pass over to the milk without the previous existence of any tubercle tissue in the udder, it is at the same time observed that in this case there is all reason for regarding it as one of exceptional character. From the detailed report on these researches it may perhaps be gathered that the matter in question stands somewhat in the following position: If it really be the case that the milk of tuberculous cows is of such great danger as the medium of communicating infection, it might certainly be expected, looking at the great spread of tuberculosis among cattle, that the disease would, at the same time, be conveyed to human beings much more frequently than it seems, in fact, really to occur with the raw milk and (though perhaps in a somewhat less degree) with the dairy produce, especially of butter and fresh cheese. The generally entertained opinion that milk from tuberculous cows, as a rule, only under certain conditions, was really of such dangerous characters, would appear to be much more in accordance with the results obtained. To prevent the conveyance of infection to the human being through the medium of tuberculous cows' milk, it should be the main consideration to watch for the earliest appearance of swelling or tumor of a tuberculous nature in the cow. Such recognition, as a rule, will not be of much difficulty, and at any rate will lead to good grounds of suspicion, such as a firm, painless, and, as a rule, speedily spreading glandular swelling, with the secretion in the first weeks retaining its natural appearance, but later on becoming thinner and more watery, but seldom of a pus nature. The question of danger of infection through the use of such milk is perhaps sufficiently summed up in the following words of the report on these researches, namely, that milk obtained from a tuberculous cow with an apparently sound udder, as a rule, will not be found dangerous; but, at the same time, as in no individual case can it be said with certainty that one may not be dealing with one of the depicted exceptions from the general rule, it would be advisable to regard such milk with suspicion in respect to its infecting powers.

HENRY B. RYDER,
Consul.

UNITED STATES CONSULATE,
Copenhagen, March 4, 1891.

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REPORTS

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ON

COMMERCE, MANUFACTURES, ETC.

No. 129.—JUNE, 1891.

AGRICULTURAL WAGES IN GERMANY.

REPORT BY CONSUL-GENERAL EDWARDS, OF BERLIN.

I transmit herewith a table showing the wages paid to agricultural laborers throughout Germany.

This table was prepared with great care from reliable data, showing the usual local rates of the daily wages of agricultural laborers at all the principal points within the German Empire.

When it is taken into consideration that the laborers "find themselves" from such wages, it seems reasonable to conclude that such food as beef and pork, at their present prices, is beyond their reach.

Table showing the daily wages of agricultural laborers in Germany.

District.	Adults.		Children.	
	Male.	Female.	Male.	Female.
THE KINGDOM OF PRUSSIA.				
Governmental district of Königsberg.				
Townships:	*Cents.*	*Cents.*	*Cents.*	*Cents.*
Allenstein (except the following towns)	28.5	14.3	9.52	5.76
Allenstein	33.3	19.04	23.8	11.9
Wartenburg	28.5	21.42	21.42	16.66
Braunsberg (except the following towns)	33.3	20.23	13.09	11.9
Braunsberg	29.6	16.66	9.52	7.14
Frauenburg	31	19.04	11.9	9.52
Mehlsack	23.8	11.9	11.9	7.14
Wormditt	23.8	17.85	20.23	11.9
Preussisch-Eilau (except the following towns)	23.8	14.28	11.9	7.14
Creuzberg	23.8	14.28	14.28	9.52
Preussisch-Eilau	23.8	14.28	14.28	9.52
Landsberg	23.8	11.9	11.9	9.52
Fischhausen (except the following towns)	28.5	16.66	11.9	9.52
Friedland	28.5	16.66	11.9	9.52
Schippenbeil	28.5	16.66	11.9	9.52
Gerdauen (including the towns of Gerdauen and Vordernberg)	27.07	14.28	11.9	9.52

Table showing the daily wages of agricultural laborers in Germany—Continued.

District.	Adults.		Children.	
	Male.	Female.	Male.	Female.
THE KINGDOM OF PRUSSIA—continued.				
Governmental district of Königsberg—Continued.				
Townships—Continued.	*Cents.*	*Cents.*	*Cents.*	*Cents.*
Heiligenbeil (except the following towns)	28.5	19.04	19.04	9.52
Heiligenbeil	28.5	19.04	14.28	9.52
Zinten	28.6	23.8	14.28	11.9
Heilsberg (except the following towns)	23.8	16.66	9.52	7.14
Gutstadt	28.5	16.66	14.28	11.9
Heilsberg	23.8	16.66	11.9	7.14
Preussisch-Holland (except the following towns)	28.5	16.66	11.9	11.9
Preussisch-Holland	29.6	16.66	11.9	11.9
Mühlhausen	28.5	16.66	11.9	11.9
Königsberg	29.6	17.67	9.52	9.52
Do	46.46	16.66	29.6	9.52
Labiau (except the town of Labiau)	28.5	16.66	14.28	14.28
Town of Labiau	28.5	19.04	16.66	11.9
Memel (except the town of Memel)	29.6	17.67	16.66	11.9
Town of Memel	35.7	23.8	19.04	16.66
Mohrungen (except the following towns)	28.5	16.66	14.28	9.52
Liebstadt	23.5	14.28	11.9	9.52
Mohrungen	28.5	16.66	19.04	9.52
Fischhausen	35.7	23.8	14.28	11.9
Pillau	47.6	23.8	23.8	11.9
Friedland (except the following towns)	28.5	16.66	11.9	9.52
Bartenstein	29.6	19.04	14.28	9.52
Domnau	23.8	14.28	11.9	7.14
Saalfeld	28.5	16.66	14.28	9.52
Neidenburg	23.8	14.28	11.9	7.14
Soldau	28.5	16.66	14.28	7.14
Ortelsburg (except the following towns)	28.5	21.42	19.04	11.9
Ortelsburg	28.5	14.28	11.9	9.52
Passenheim	23.8	11.9	9.52	9.52
Willenberg	23.8	11.9	11.9	9.52
Osterode (except the following towns)	28.5	21.42	16.66	14.28
Gilgenburg	29.6	16.66	14.28	7.14
Hohenstein	28.5	14.28	14.28	7.14
Lübennöhl	23.8	14.28	14.28	7.14
Osterode	30.94	23.8	16.66	11.9
Rastenburg (except the following towns)	28.5	16.66	16.66	11.9
Barten	23.8	14.28	9.52	7.14
Drengfurt	23.8	14.28	11.9	9.52
Rastenburg	28.5	16.66	16.66	9.52
Rössel (except the following towns)	28.5	21.42	16.66	11.9
Bischofsburg	23.8	21.42	11.9	9.52
Bischofsstein	23.8	14.28	11.9	7.14
Seeburg	23.8	16.66	14.28	9.52
Wehlau (except the following towns)	28.5	14.28	14.28	11.9
Altenburg	23.8	14.28	14.28	9.52
Tapiau	23.8	16.66	14.28	11.9
Wehlau	28.5	16.66	19.04	11.9
Governmental district of Gumbinnen.				
Townships:				
Heidekrug and Niederung	28.5	14.28	14.28	7.14
Tilsit (except town of Tilsit), Ragnit, Pilkallen, Stallupöhnen, Gumbinnen, and Insterburg (except town of Insterburg)	23.8	11.9	14.9	4.76
Darkehmen and Goldapp	23.8	11.9	11.9	4.76
Olesho, Liek, Lötzen, Sensburg, Johannesburg, and Angerburg	19.04	9.52	9.52	4.76
Towns of Tilsit and Insterburg	23.8	19.04	11.9	9.52

Table showing the daily wages of agricultural laborers in Germany—Continued.

District.	Adults.		Children.	
	Male.	Female.	Male.	Female.
THE KINGDOM OF PRUSSIA—continued.				
Governmental district of Dantzic.				
Townships:	*Cents.*	*Cents.*	*Cents.*	*Cents.*
Dantzic	42.84	24.4	15.3	12.9
Towns—				
Dirschau	35.7	20.05	19	14.28
Elbing	35.7	23.8	15.3	12.9
Marienburg	35.7	20.05	19	14.28
Neustadt	23.8	19	11.9	11.9
Neuteich	35.7	20.05	19	14.28
Putzig	23.8	19	11.9	11.9
Schöneck	23.8	19	11.9	11.9
Tiegenhof	38.08	20.23	17.85	14.28
Tolkemit	33.3	20.23	17.85	14.28
Prussian Stargard	35.7	20.23	17.85	14.28
Berent (except the town of Berent)	28.5	17.85	11.9	11.9
Town of Berent	23.8	19	11.9	11.9
Carthaus, district of Kahlbude	28.5	17.85	16.66	11.9
Districts:				
Dantzicker Höhe—				
Saspe and Schellmühl	42.84	23.8	17.85	14.28
Other districts	33.3	17.85	17.85	14.28
Dantzicker Niederung—				
Krakau, Henbude, Treyl, Weichselmünde, Gross Klein Piehnendorf, and Bürgerwiesen	42.84	23.8	17.85	14.28
Other districts	33.3	17.85	17.85	14.28
Townships (except the above-mentioned towns):				
Dirschau (except the town of Dirschau)	33.3	17.85	17.85	14.28
Elbing	33.3	20.23	17.85	14.28
Marienburg	33.3	20.23	17.85	14.28
Neustadt	28.5	17.85	11.9	11.9
Putzig	28.5	17.85	11.9	11.9
Prussian Stargard	33.3	17.85	11.9	11.9
Governmental district of Marienwerder.				
Townships:				
Briesen (except the following towns)	26.1	17.85	14.28	11.9
Briesen	23.8	17.85	11.9	9.52
Gollub	33.3	23.8	19.04	17.85
Schönsee	28.5	19.04	14.28	14.28
Kulm (except the town of Kulm)	32.13	21.42	9.52	7.14
Town of Kulm	38.08	14.28	11.9	11.9
Flatow (except the following towns)	26.18	14.28	9.52	9.52
Flatow	29.6	14.28	9.52	9.57
Zempelburg	29.6	14.28	9.52	9.52
Krojanke	30.94	23.8	14.28	11.9
Vandsburg	38.55	20.23	11.9	11.9
Cammin	29.6	23.8	23.8	19.04
Grandenz (except the following towns)	29.6	17.85	14.28	11.9
Grandenz	29.6	17.85	14.28	11.9
Rehden	30.94	21.42	19.04	16.66
Lessen	23.8	17.85	17.85	14.28
Konitz (except the town of Konitz)	30.94	21.42	17.85	14.3
Town of Konitz	33.3	16.66	11.9	11.9
Deutsch-Krone (except the following towns)	23.8	16.66	11.9	7.14
Deutsch-Krone	23.8	16.66	11.9	7.14
Jastrow	23.8	14.28	11.9	7.14
Friedland (Mecklenburg-Strelitz)	23.99	27.85	11.9	7.14
Schlappe	23.8	14.28	14.28	9.52

Table showing the daily wages of agricultural laborers in Germany—Continued.

District.	Adults.		Children.	
	Male.	Female.	Male.	Female.
THE KINGDOM OF PRUSSIA—continued.				
Governmental district of Marienwerder—Continued.				
Townships—Continued.	*Cents.*	*Cents.*	*Cents.*	*Cents.*
Löbeau (except the following towns)	35.7	11.9	11.9	9.52
Löbeau	19.4	9.52	4.76	4.76
Neumark	23.8	15.47	11.9	9.52
Kauernick	26.1	16.66	21.42	11.9
Marienwerder (except the following towns)	28.5	17.85	11.9	11.9
Marienwerder	35.7	20.23	15.47	11.92
Mewe	35.7	23.8	11.9	9.52
Garnsee	35.7	23.8	17.85	11.9
Rosenberg (except the following towns)	28.5	17.67	14.28	14.28
Rosenberg	23.5	14.28	11.9	9.52
Deutsch Eilau	29.56	14.28	11.9	9.52
Riesenburg	23.8	11.9	7.14	5.95
Bischofswerder	35.7	19.4	11.9	7.14
Freistadt	24.03	21.42	17.67	17.67
Schlochau (except the following towns)	24.03	19.04	15.47	14.28
Schlochau	35.7	23.8	15.47	14.28
Hammerstein	24.03	14.28	16.66	11.9
Baldenburg	28.5	17.67	15.47	14.28
Prussian Friedland	29.56	17.67	19.04	11.9
Landeck	23.8	16.66	14.28	14.28
Schwetz (except the following towns)	31	19.04	14.28	13.1
Schwetz	29.56	21.42	9.04	14.28
Neuenburg	19.04	19.04	9.52	9.52
Strasburg (except the following towns)	33.3	23.8	19.04	17.67
Strasburg	33.3	23.8	19.04	17.67
Gorzno	33.3	23.8	19.04	17.67
Lautenburg	30.75	23.8	19.04	17.67
Stuhm (except the following towns)	29.56	19.04	14.28	11.9
Stuhm	35.7	23.8	23.8	17.67
Christburg	21.42	19.04	14.28	11.9
Thorn (except the following towns)	24.03	21.42	16.66	13.1
Thorn	28.5	19.04	14.28	14.28
Kulm See	28.5	19.04	23.8	14.28
Tuchel	28.5	21.42	16.66	16.66
Governmental district of Potsdam.				
Townships:				
Angermünde—				
Districts	33.3	17.67	14.28	11.9
Towns:				
Angermünde	41.47	19.7	24.9	19.67
Greifenberg	29.56	17.67	17.67	11.9
Joachimsthal	29.56	16.66	23.8	11.9
Oderberg	35.7	19.04	21.42	19.04
Schwedt	35.7	23.8	14.28	11.9
Brandenburg	59.5	.....	23.8	.....
Beeskow and Storkow	29.56	21.42	19.04	16.66
Charlottenburg	47.6	23.8	17.67	11.9
Jüterbogk and Luckenwalde:				
Town of Lukenwalde	35.7	23.8	19.9	17.67
Other part	28.5	19.04	15.6	14.28
Niederbarnim:				
Lichtenberg and Stralau	52.36	28.5	23.8	17.67
Districts of Friedrichsfelde, Weissensee, Ober Schönweide, Pankow, Franz Buchholz, Dalldorf, and Tegel Dahlwetz	47.6	23.8	21.42	16.66
Community of Neu Holland	47.6	42.47	23.8	23.8

Table showing the daily wages of agricultural laborers in Germany—Continued.

District.	Adults.		Children.	
	Male.	Female.	Male.	Female.
THE KINGDOM OF PRUSSIA—continued.				
Governmental district of Potsdam—Continued.				
Townships—Continued.				
Niederbarnim—Continued.	*Cents.*	*Cents.*	*Cents.*	*Cents.*
Town of Bernau	41.47	23.8	23.8	11.9
Town of Oranienburg	41.47	23.8	23.8	11.9
Communities of Blumberg and Friedrichshagen	41.47	19.04	23.8	11.9
Communities of Ruhleben, Spandau, and Forst	56.2	35.7	30.48	23.8
Communities of Birkenwerder, Borgsdorf, Freienhorgen, and Woltersdorf	33.3	16.66	14.28	91.52
District of Malchow	35.7	19.04	16.66	11.9
Other parts	35.7	19.04	16.66	11.9
Oberbarnim (except the town of Eberswalde)	35.7	21.42	16.66	14.28
Town of Eberswalde	35.7	23.8	17.67	11.9
Osthavelland	35.7	17.67	17.67	11.9
Ostprignitz	35.7	23.8	14.28	11.9
Prenzlau	33.3	19.04	14.28	9.52
Potsdam	47.6	23,8	11.9	11.9
Ruppin—				
Town of Ruppin	37.96	23.8	14.28	14.28
Other part	31	17.67	9.52	9.52
Spandau	59.5	37.7	19.04	19.04
Teltow—				
Communities of Rixdorf, Britz, Friedenau, Steglitz, Gross Lichterfelde, Wilmersdorf, Schmargendorf, and Dahlem	56.2	35.7	31	23.8
Town of Teltow and communities of Schönow, Stahnsdorf, Ruhlsdorf, Klein Machnow, Düppel, Zehlendorf, Klein Beeren, Gross Beeren, and Diedersdorf	47.6	23.8	19.04	14.28
Tempelhof and Hasenheide	56.2	35.7	31	23.8
Communities of Laukwitz, Marienfelde, Buckow, and Gross Ziethen and farms of Osdorf and Lichtenrade	37.96	23.8	19.04	14.28
Communities of Nanawe and Neuendorf	47.6	35.7	23.8	19.04
Municipalities and country houses of Klein Glienicke, Drewitz, Stolpe, Schenkendorf, Nudow, Potsdamer, and Forst	35.7	23.8	16.66	14.28
Town of Köpenick and municipalities of Treptow, N. Schönweide, Johannisthal, Adlershof, Grünau, and Kietz	59.5	35.7	31	23.8
Alt-Glienicke, Neu-Glienicke, Südersdorf, Gadsdorf, Wilmersdorf, Thyrow, Siethen, Wietstock, Löwenbruch, and Cliestow	35.7	19.04	14.28	11.9
Municipalities of Clausdorf and Sporenberg	35.7	23.8	14.28	14.28
Other parts	35.7	23.8	19.04	14.28
Templin:				
Towns	33.3	19.04	19.04	14.28
Municipalities and counties	31	16.66	16.66	14.28
Westhavelland, town of Rathenow	38	23.8	21.42	14.28
Wittenberge:				
Town of Wittenberge	47.6	23.8	23.8	23.8
Other part	35.7	23.8	11.9	11.9
Zauch-Belzig	29.6	19.04	16.66	13
Berlin	59.5	35.7	31	23.8
Governmental district of Frankfort-on-the-Oder.				
Townships:				
Arnswalde	23.8	16.66	9.52	9.52
Kalau	28.5	19.04	14.28	14.28
Cottbus (land district)	28.5	19.04	14.28	14.28
Crossen	28.5	19.04	14.28	14.28
Friedsberg	28.5	19.04	14.28	14.28
Guben (land district)	23.5	16.66	11.9	11.9

Table showing the daily wages of agricultural laborers in Germany—Continued.

District.	Adults.		Children.	
	Male.	Female.	Male.	Female.
THE KINGDOM OF PRUSSIA—continued.				
Governmental district of Frankfort-on-the-Oder—Continued.				
Townships—Continued.	*Cents.*	*Cents.*	*Cents.*	*Cents.*
Königsberg (except the town of Küstrin)	35.7	23.8	14.28	14.28
Landsberg (except the town of Landsberg), Lebus, Luckau, Lübben, Soldin, and Sorau (except the town of Forst)	28.5	19.04	14.28	14.28
Spremberg (except the town of Spremberg)	23.8	16.66	14.28	11.9
East Sternberg	23.8	14.28	11.9	11.9
Züllichau and Schwiebus (except the towns of Züllichau, Liebenau, and Schwiebus)	23.8	14.28	9.52	9.52
Frankfort-on-the-Oder	42.8	26.1	23.8	16.66
Guben	35.7	23.8	16.66	16.66
Cottbus	35.7	23.8	14.28	14.28
Towns:				
Forst	42.8	29.6	16.66	16.66
Küstrin	41.7	23.8	19.04	14.28
Landsberg-on-the-Warta	33.3	21.42	14.28	14.28
Spremberg	28.5	19.04	14.28	14.28
Züllichau, Liebenau, and Schwiebus	28.5	19.04	14.28	14.28
Governmental district of Stettin.				
Township of Stettin	47.6	23.8	23.8	14.28
Town of Stargard	35.7	.....	.....	.....
Other parts	28.5	16.66	11.9	9.52
Governmental district of Cöslin.				
Townships (except the below-mentioned towns):				
Belgard	29.69	19.04	14.28	14.28
Bütow	22.61	11.9	7.14	7.14
Bublitz	23.8	11.9	7.14	7.14
Cöslin	29.69	19.04	14.28	14.28
Colberg	29.69	19.04	14.28	14.28
Dramburg	28.5	19.04	14.28	14.28
Neustettin	26.18	17.75	11.9	11.9
Lauenburg	29.69	19.04	14.28	14.28
Schivelbein, Schlawe, and Stolp	29.69	19.04	14.28	14.28
Rummelsburg—				
Municipalities of Varzin, Woblanse, Seelitz, Bartin, and Wussow	29.69	17.75	17.75	16.18
Other part	23.8	11.9	11.9	11.9
Towns:				
Bärwalde	27.37	16.66	11.9	9.52
Belgrad	33.3	19.04	19.04	16.18
Bublitz	27.37	16.66	9.52	7.14
Bütow	23.8	14.28	9.52	7.14
Dramburg	29.69	17.75	14.28	11.9
Falkenburg	30.94	19.04	16.66	14.28
Callies	30.94	19.04	16.66	14.28
Colberg	35.7	19.04	19.04	16.18
Körlin	29.69	17.75	14.28	11.9
Coslin	33.3	19.04	19.04	15.47
Lauenburg	30.94	19.04	16.66	14.28
Neustettin	29.69	17.75	14.28	11.9
Pollnow	23.8	14.28	9.52	7.14
Polzin	27.37	16.66	11.9	9.52
Ratzebuhr	27.37	16.66	11.9	9.52
Rügenwalde	30.94	19.04	16.66	14.28
Rummelsburg	29.69	17.75	14.28	11.9
Schlawe	29.69	17.75	11.9	9.52

Table showing the daily wages of agricultural laborers in Germany—Continued.

District.	Adults.		Children.	
	Male.	Female.	Male.	Female.
THE KINGDOM OF PRUSSIA—continued.				
Governmental district of Cöslin—Continued.				
Towns—Continued.	*Cents.*	*Cents.*	*Cents.*	*Cents.*
Schivelbein	29.69	17.75	14.28	11.9
Stolp	37.8	26.18	23.8	15.47
Tempelburg	29.69	17.75	14.28	11.9
Zanow	30.94	19.04	16.66	14.28
Governmental district of Stralsund.				
Towns of Stralsund and Greifswald	35.7	23.8	14.28	9.52
Other part	35.7	21.42	11.9	9.52
Governmental district of Posen.				
Townships:				
Adelnau	23.8	11.9	11.9	9.52
Birnbaum	27.37	15.47	11.9	9.52
Bamst	22.61	14.28	10.54	7.14
Fraustadt	22.61	14.28	11.9	9.52
Gostin	23.8	14.28	11.9	9.52
Graetz	29.69	20.23	15.47	9.52
Yarotschin	24.9	15.47	14.28	9.52
Kempen	28.5	19.04	14.28	9.52
Koschmin	23.8	15.47	11.9	9.52
Kosten	24.9	14.28	10.54	9.52
Krotoszyn	23.8	15.47	11.9	9.52
Lissa	23.8	14.28	11.9	9.52
Town of Lissa	35.7	19.04	15.47	13.09
Meseritz	27.37	17.85	13.09	10.71
Neutomischel	30.94	21.42	16.66	10.71
Obornick	23.8	16.66	11.9	9.52
Ostrowo	24.9	15.47	14.28	10.71
Pleschen	24.9	15.47	14.28	10.71
East Posen	28.5	14.28	10.71	8.33
West Posen	23.5	13.09	10.71	8.33
Town of Posen	38.08	23.8	17.85	11.9
Rawitsch	27.37	16.66	11.9	9.52
Town of Rawitsch	35.7	19.04	19.04	14.28
Samter	26.8	15.47	9.52	7.14
Schildburg	23.8	16.66	11.9	9.52
Schmiegel	24.9	14.28	10.71	9.52
Schrimm	23.8	11.9	11.9	7.14
Schroda	28.5	16.66	9.52	7.14
Schwerin-on-the-Warta	27.37	15.47	11.9	9.52
Wreschen	29.75	17.85	14.28	9.52
Governmental district of Bromberg.				
Towns of Bromberg, Inowrazlaw, Schneidemühl, Nakel, Okollo, Schleusenau, Prinzenthal, Schröttersdorf, Gross and Klein Bartelsee, Adlershorst, Schöndorf, Yügerhof, Bleichfelde, Wülhelmsthal, Jagdschütz, Oplawitz, and Kleinau	35.7	23.8	23.8	17.85
Other part	28.5	19.04	14.28	9.52
Governmental district of Breslau.				
Townships:				
Breslau	38	23.8	19.04	14.28
Land district of Breslau	21.42	15.47	11.9	11.9
Brieg	23.8	14.28	14.28	9.52
Frankenstein	21.42	15.47	11.9	9.52
Glatz	23.8	17.85	14.28	11.9
Gross-Wartenberg	19.04	14.28	9.52	7.14

Table showing the daily wages of agricultural laborers in Germany—Continued.

District.	Adults.		Children.	
	Male.	Female.	Male.	Female.
THE KINGDOM OF PRUSSIA—continued.				
Governmental district of Breslau—Continued.				
Townships—Continued.	*Cents.*	*Cents.*	*Cents.*	*Cents.*
Guhrau	23.8	11.9	11.9	7.14
Habelschwert	23.8	14.28	14.28	9.52
Militsch	29.04	11.9	11.9	7.14
Münsterberg	23.8	16.66	14.28	11.9
Namslau	23.8	14.28	14.28	9.52
Neumarkt	23.8	11.9	11.42	9.52
Neurode	23.8	14.28	9.52	9.52
Nimptsch	21.42	14.28	11.9	11.9
Oels	21.42	14.28	11.9	11.9
Ohlau	26.8	21.42	11.9	11.9
Reichenbach	26.8	21.42	16.66	14.28
Towns of Schweidnitz and Freiburg	30.94	20.23	16.66	11.9
Other part	23.8	14.28	11.9	11.9
Striegau—				
Town of Striegau	28.5	19.04	11.9	11.9
Other part	23.8	14.28	11.9	11.9
Strehlen	26.8	20.23	15.37	13
Trebnitz	20.2	11.9	11.42	8.33
Waldenburg	26.8	16.66	14.28	9.52
Wohlau	23.8	11.9	11.9	8.33
Governmental district of Liegnitz.				
Townships:				
Bolkenhain	26.8	16.66	13.09	11.9
Bunzlau	23.8	15.47	13.09	10.71
Freistadt	23.8	14.28	11.9	9.52
Glogau (except the town of Glogau)	26.8	14.28	11.9	9.52
Görlitz (land district)	27.37	16.66	13.09	9.52
Goldberg and Haynau	23.8	14.28	10.71	9.52
Grünberg	23.8	14.28	10.71	11.9
Hüschberg	28.5	19.04	14.28	9.52
Hoyerswerda	23.8	16.66	14.28	10.71
Tauer	23.8	14.38	11.9	9.52
Landshut	28.5	16.66	11.9	9.52
Lauban (except the town of Lauban)	27.37	16.66	10.71	9.52
Liegnitz (land district)	23.8	14.28	11.9	10.71
Löwenberg	23.8	16.66	14.28	11.9
Lüben	23.8	11.9	9.52	8.33
Sagan	23.8	14.28	11.9	9.52
Görlitz	38.08	23.8	19.04	14.28
Liegnitz	35.7	23.8	14.28	14.28
Weisswasser	35.7	20.23	19.04	16.66
Towns:				
Glogau	28.5	19.04	17.85	11.9
Goldberg	38.08	28.5	14.28	11.9
Haynau	30.94	23.8	19.04	16.66
Grünberg	33.3	23.8	19.04	14.28
Lauban	30.94	23.8	14.28	11.9
Muskau	28.5	20.9	16.66	14.28
Sagan	28.5	19.04	16.66	10.71
Sprottau	28.5	17.85	11.9	11.9
Governmental district of Oppeln.				
Townships:				
Beuthen—				
Towns of Beuthen and Königshütte	28.5	19.04	19.04	18.28
Other part	28.5	16.66	16.66	11.9

Table showing the daily wages of agricultural laborers in Germany—Continued.

District.	Adults.		Children.	
	Male.	Female.	Male.	Female.
THE KINGDOM OF PRUSSIA—continued.				
Governmental district of Oppeln—Continued.				
Townships—Continued.				
Casel—	*Cents.*	*Cents.*	*Cents.*	*Cents.*
Town of Casel	23.8	19.04	14.28	9.52
Other part	21.42	14.28	14.28	9.52
Creuzburg	26.8	16.66	14.28	14.28
Towns of the other part	21.42	11.9	11.9	9.52
Falkenberg	19.04	14.28	14.28	9.52
Gleiwitz—				
Town of Gleiwitz	23.8	19.04	14.28	9.52
Other part	19.04	14.28	14.28	9.52
Gross Strehlitz—				
Town of Gross Strehlitz	23.8	14.28	14.28	11.9
Other part	19.04	14.28	14.28	9.52
Kattowitz—				
Town of Kattowitz	28.5	19.04	19.04	14.28
Other part	28.5	16.66	16.66	11.9
Leobschütz—				
Towns of Leobschütz and Katscher	23.8	19.04	10.28	9.52
Other part	21.42	14.28	14.28	9.52
Lublinitz	19.04	11.9	11.9	7.14
Neisse—				
Towns:				
Neisse	26.8	19.04	19.04	16.6
Patschkau	21.42	14.28	14.28	9.52
Ziegenhals	23.8	19.04	14.28	9.52
Other parts	19.04	14.28	14.28	9.52
Neustadt—				
Towns of Neustadt and Zülz	23.8	19.04	14.28	9.52
Other part	21.42	14.28	14.28	9.52
Oppeln—				
Towns:				
Oppeln	23.8	16.66	14.28	9.52
Krappitz	23.8	14.28	11.9	9.52
Other parts	23.8	14.28	11.9	7.14
Pless	23.8	16.66	11.9	9.52
Ratibor—				
Town of Ratibor	26.8	19.04	14.28	11.9
Other part	21.42	14.28	14.28	9.52
Rosenberg	19.04	11.9	11.9	7.14
Rybnik	19.04	11.9	9.52	9.52
Tarnowitz—				
Towns of Tarnowitz and Georgenberg	28.5	19.04	14.28	14.28
Other part	23.8	14.28	14.28	9.52
Zaborze—				
Towns of Biskupitz, Darotheendorf, Ruda, Alt-Zaborze, Klein-Zaborze, and Zaborze	28.5	19.04	14.28	11.9
Other part	19.04	14.28	14.28	9.52
Governmental district of Magdeburg.				
Aschersleben (except the town of Aschersleben)	38	23.8	22.61	17.85
Jerichow:				
Without Pretzier, Plötzka, and Darmigkow	35.7	17.85	17.85	14.28
With Pretzier, Plötzka, and Darmigkow	47.6	23.8	23.8	16.66
Kalbe-on-the-Saale:				
Löderburg, Borne, Atzendorf, and Forderstedt	47.6	28.5	26.8	21.42
Eickendorf, Biere, Eggersdorf, Alt-Salze, Frohse, and Gnadau	41.65	23.8	23.8	19.04

Table showing the daily wages of agricultural laborers in Germany—Continued.

District.	Adults.		Children.	
	Male.	Female.	Male.	Female.
THE KINGDOM OF PRUSSIA—continued.				
Governmental district of Magdeburg—Continued.				
Kalbe-on-the-Saale—Continued.	*Cents.*	*Cents.*	*Cents.*	*Cents.*
Districts of Glöthe, Neugattersleben, Brumby, Barby, and Kalbe	38	23.8	23.8	19.04
Rosenberg, Tuchau, Micheln, Lödderitz, and Surigke	35.7	23.8	21.42	19.04
Gardelegen (except the town of Gardelegen)	35.7	22.61	16.66	11.9
Halberstadt (except the town of Halberstadt)	35.7	23.8	23.8	17.85
Osterburg (except the town of Osterburg)	35.7	23.8	23.8	16.66
Salzwedel (except the town of Salzwedel)	35.7	23.8	21.42	16.66
Neu-Haldensleben (except the town of Neu-Haldensleben):				
Districts of Waekersleben, Hötensleben, Völpke, Barnsberg, Warsleben, Eilsleben, Warmsdorf, Ummendorf, Sammerschenberg, and Bartensleben	40.4	23.8	23.8	19.04
Other parts of the district	35.7	19.04	19.04	16.66
Oschersleben (except the town of Oschersleben)	38	23.8	23.8	19.04
Stendal:				
Without Vaethen and Tangerhertle	33.3	19.04	16.66	14.28
With Vaethen and Tangerhertle	35.7	23.8	16.66	14.28
Wanzleben (except the town of Wanzleben)	38	23.8	23.8	19.04
Wernigerode (except the town of Wernigerode)	38	23.8	23.8	19.04
Wolmirstedt (except the town of Wolmirstedt):				
Olvenstadt	47.6	23.8	23.8	19.04
Other parts of the district	38	23.8	23.8	19.04
Towns:				
Aken	38	23.8	23.8	19.04
Arendsee	35.7	17.85	14.28	14.28
Arneberg	35.7	23.8	17.85	17.85
Aschersleben	38	26.8	23.8	21.42
Barby	38	23.8	23.8	19.04
Bismark	35.7	23.8	19.84	16.66
Burg	35.7	23.8	19.04	16.66
Kalbe-on-the-Saale	38	23.8	23.8	20.23
Kalbe-on-the-Main	35.7	23.8	21.42	16.66
Clötze	35.7	23.8	21.42	16.66
Kochstedt	35.7	23.8	23.8	23.8
Croppenstädt	38	23.8	23.8	19.04
Dardesheim	35.7	23.8	23.8	17.85
Derenburg	35.7	23.8	23.8	17.85
Egeln	35.7	23.8	23.8	21.42
Gardelegen	35.7	23.8	23.8	16.66
Genthin	35.7	21.42	19.04	14.28
Gommern	47.6	23.8	23.8	16.66
Gröningen	41.65	26.18	28.5	23.8
Hadmersleben	38	23.8	23.8	19.04
Halberstadt	47.6	28.5	21.42	19.04
Hornburg	35.7	23.8	23.8	19.04
Jerichow	35.7	19.04	16.66	11.9
Loburg	35.7	17.85	17.85	14.28
Magdeburg (with Buckau and Neustadt)	47.6	33.3	28.5	23.8
Möckorn	35.7	17.85	17.85	14.28
Neu-Haldensleben	41.65	23.8	23.8	17.85
Oebisfelde	38	23.8	23.8	19.04
Oschersleben	41.65	28.5	23.8	19.04
Osterburg	35.7	23.8	23.8	19.04
Osterwick	40.4	23.8	23.8	19.04
Onedlinburg	38	26.18	26.18	21.42
Gross Salze	41.65	23.8	23.8	19.04
Salzwedel	38	26.18	23.8	17.85

Table showing the daily wages of agricultural laborers in Germany—Continued.

District.	Adults.		Children.	
	Male.	Female.	Male.	Female.
THE KINGDOM OF PRUSSIA—continued.				
Governmental district of Magdeburg—Continued.				
Towns—Continued.	*Cents.*	*Cents.*	*Cents.*	*Cents.*
Sandau	35.7	21.42	17.85	11.9
Schönebeck	47.6	28.5	23.8	19.04
Schwanebeck	38.08	23.8	23.8	19.04
Seehausen (on the Aland)	35.7	23.8	23.8	17.85
Seehausen (near Magdeburg)	38.08	23.8	19.04	18.85
Stassfurt	47.6	28.5	28.5	19.04
Stendal	35.7	23.8	17.85	17.85
Tangermünde	35.7	23.8	23.8	17.85
Wanzleben	35.7	23.8	23.8	21.42
Wegeleben	38.08	23.8	23.8	19.04
Werben	35.7	23.8	23.8	17.85
Wernigerode	40.4	28.5	23.8	19.04
Wolmirstedt	41.65	23.8	23.8	23.8
Ziesar	35.7	19.04	19.04	14.28
Governmental district of Merseburg.				
Townships:				
Bitterfeld	35.7	19.04	19.04	14.28
Delitzsch—				
Town of Ellenburg	35.7	23.8	21.42	19.04
Districts of Paupitzsch, Loebnitz, Reibitz, Badrina, Pressen, Jesewitz, Hohenpriessnitz, Tiefensee, Mensdorf, Doberschütz, and Spratta	28.5	16.66	11.9	11.9
Other parts	33.3	19.04	14.28	14.28
Districts:				
Eckartsberga	29.6	17.85	17.85	14.28
Liebenwerda	28.5	16.66	11.9	9.52
Mansfeld—				
Towns of Ermsleben, Hettstädt, Leimbach, and Mansfeld	38.08	23.8	21.42	14.28
Other part	35.7	19.04	19.04	14.28
Naumberg—				
Town of Naumburg	41.65	21.42	27.37	19.04
Other part	41.65	21.42	17.85	14.28
Querfurt	35.7	19.04	19.04	19.04
Saalkreis	41.65	19.04	23.8	16.66
Sangerhausen—				
Towns of Sangerhausen and Artern	38.08	23.8	19.04	19.04
Other part	29.6	19.04	16.66	16.66
Schweinitz	28.5	16.66	11.9	9.52
Torgau	29.6	16.66	17.85	14.28
Weissenfels—				
Towns of Weissenfels and Teuchern	38.08	23.8	23.8	19.04
Other part	33.3	19.04	19.04	14.28
Wittenberg	33.3	16.66	16.66	11.9
Town of Zeitz	41.65	23.8	19.04	17.85
Other part	35.7	19.04	23.8	17.85
Township of Halle-on-the-Saale	52.36	26.11	28.5	23.8
Governmental district of Erfurt.				
Townships:				
Erfurt	47.6	28.5	21.42	19.04
Nordhausen	38.08	21.42	16.66	16.66
Heiligenstadt (except the below-mentioned towns)	28.5	19.04	14.28	11.9
Langensalza (except the below-mentioned towns)	35.7	21.42	16.66	14.28
Mühlhausen (except the below-mentioned towns)	33.3	21.42	16.66	14.28

Table showing the daily wages of agricultural laborers in Germany—Continued.

District.	Adults.		Children.	
	Male.	Female.	Male.	Female.
THE KINGDOM OF PRUSSIA—continued.				
Governmental district of Erfurt—Continued.				
Townships—Continued.	*Cents.*	*Cents.*	*Cents.*	*Cents.*
Schleusingen	35.7	23.8	19.04	14.28
Hohenstein	23.8	17.85	14.28	19.04
Weissensee (except the below-mentioned towns)	33.3	21.42	16.66	14.28
Worbis	33.3	19.04	14.28	14.28
Ziegenrück	19.04	17.85	14.28	9.52
Towns:				
Langensalza	38.08	21.42	16.66	16.66
Mühlhausen	38.08	21.42	16.66	16.66
Tennstedt	29.6	21.42	16.66	14.28
Heiligenstedt	38.08	19.04	16.66	14.28
Dingelstedt	38.08	19.04	14.28	11.9
Ziegenrück	35.7	23.8	29.42	17.66
Ranis	35.7	23.8	21.42	17.66
Sömmerda	38.08	29.42	16.66	14.28
Governmental district of Schleswig.				
Townships:				
Altona	58.6	47.84	23.8	23.8
Apenrade	42.84	31	23.8	21.42
Town of Apenrade	54.4	.....	.....	.....
Eckernförde—				
Districts:				
Barby	47.6	28.5	17.85	15.37
Barkelsby	38.08	21.42	14.28	11.9
Rögen	35.7	17.85	14.28	11.9
Saetorf	38.08	21.42	17.85	12.09
Ludwigsburg	32.13	19.04	14.28	11.9
Damp	38.08	21.42	14.28	14.28
Karby	38.08	23.8	23.8	14.28
Grünholz	36.8	23.8	14.28	11.9
Maasleben	44.03	21.42	14.28	14.28
Escholsmark	36.8	20.23	15.47	11.92
Blistorf	42.8	23.8	16.66	14.28
Fleekeby	38.9	22.61	17.85	15.47
Hütten	40.28	21.42	16.66	14.28
Owschlag	38.08	17.85	15.47	11.9
Gross Wittensee	42.8	22.61	16.66	14.28
Sehestedt	40.28	21.42	15.47	11.92
Windeby	36.8	17.85	11.9	11.9
Marienthal	47.6	23.8	17.85	15.47
Altenhof	47.6	23.8	17.85	15.47
Lindau	35.7	20.23	14.66	11.92
Warleberg	43.9	22.61	16.66	15.47
Borghorst	40.28	20.23	16.66	14.28
Rendsburg	47.6	32.13	23.8	21.42
Town of Rendsburg	57.1	.....	.....	.....
Schleswig	42.8	28.5	21.42	16.66
Segeberg	40.28	28.5	19.04	16.66
Sonderburg	38.08	28.5	21.42	19.04
Steinburg	47.6	28.5	20.23	15.47
Stormann, Wandsbeck, Reinbeck, Sande, Lohbrügge, Loberg, Kirch, Steinbeck, Schoffbeck, and Oejendorf	59.5	42.8	23.8	23.8
Geest	42.8	28.5	23.8	14.28
Other places	42.8	28.5	19.04	17.85

Table showing the daily wages of agricultural laborers in Germany—Continued.

District.	Adults.		Children.	
	Male.	Female.	Male.	Female.
THE KINGDOM OF PRUSSIA—continued.				
Governmental district of Schleswig—Continued.				
Marsch districts:	*Cents.*	*Cents.*	*Cents.*	*Cents.*
Tondern, Islands of Silt, and Föhr	52.3	33.3	28.5	19.04
Tondern, Goger	57.1	28.5	30.94	16.66
Other places	47.6	21.42	28.5	14.28
Governmental district of Hanover.				
Townships:				
Diepholz	38.08	26.1	21.42	19.04
Hameln—				
Towns:				
Hameln	47.6	29.69	17.85	11.9
Bodenwerder	35.7	23.8	19.04	17.85
Other parts	35.7	23.8	17.85	11.9
Land district of Hanover	42.84	28.5	23.8	19.04
Townships:				
Hanover	47.6	35.7	28.5	23.8
Hoya	35.7	26.1	23.8	16.66
Linden	47.6	30.94	23.8	16.66
Land district of Linden—				
Badenstedt, Bormm, Davenstedt, Limmer, and Ricklington	47.6	30.94	23.8	16.66
Other part of the formerly country district of Linden	35.7	23.8	23.8	14.28
Wennigsen	47.6	28.5	23.8	19.04
Townships:				
Neustadt-am-Rubenberge	35.7	23.5	23.8	.....
Town of Wunsdorf	35.7	26.18	19.04	19.04
Other part	35.7	26.18	19.04	19.04
Nienburg—				
Town of Nienburg	38.08	23.8	30.94	19.04
Other part	33.3	19.04	19.04	16.66
Springe—				
Towns:				
Springe	35.7	23.8	23.8	19.04
Eldagsen	35.7	24.99	26.1	23.8
Münder	35.7	23.8	23.8	17.85
Pattensen	35.7	23.8	28.5	23.6
Other part	33.3	23.8	16.66	14.28
Stolzenau	33.3	21.42	16.66	14.28
Sulingen	35.7	23.3	23.8	14.28
Syke—				
Freidorf	47.6	23.8	23.8	11.9
Former Freudenberg	35.7	23.8	19.04	11.9
Governmental district of Hildesheim.				
Townships:				
Alfeld—				
Municipalities of Alfeld and Lübbrechtsen	35.7	19.04	19.04	14.28
Other part	35.7	23.8	19.04	14.28
Duderstadt—				
Town of Duderstadt	38.08	26.18	23.8	16.66
Other part	35.7	23.8	16.66	16.66
Einbeck—				
Town of Einbeck	35.7	23.8	19.04	19.04
Other part	35.7	23.8	23.8	16.66
Göttingen—				
Towns:				
Göttingen	35.7	23.8	19.04	14.28
Reinhausen (except Meensen and Ellerode)	38.5	19.04	19.04	14.28

Table showing the daily wages of agricultural laborers in Germany—Continued.

District.	Adults.		Children.	
	Male.	Female.	Male.	Female.
THE KINGDOM OF PRUSSIA—continued.				
Governmental district of Hildesheim—Continued.				
Townships—Continued.				
Peine—	*Cents.*	*Cents.*	*Cents.*	*Cents.*
Town of Peine	42.84	28.5	19.04	19.04
Other part	38.08	21.42	21.42	14.28
Uslar	28.5	21.42	21.42	14.28
Zellerfeld	29.68	21.42	17.85	14.28
Governmental district of Lüneburg.				
Townships:				
Burgdorf—				
Land district of Burgdorf	35.7	26.18	19.04	14.28
Burgwedel	35.7	26.18	21.42	19.04
Town of Burgdorf	35.7	28.5	26.18	23.8
Bleckede (former bailiffs of Bleckede and Neuhaus-on-the Elbe)	28.5	19.04	19.04	14.28
Celle	35.7	23.8	19.04	19.08
Land district of Celle—				
Bergen	33.3	23.8	23.8	14.28
Celle	35.7	23.8	21.42	16.66
Meinersen	35.7	26.18	23.8	19.04
Dannenberg (except the town of Dannenberg)	35.7	26.18	19.04	19.04
Town of Dannenberg	33.3	23.8	.....	.....
Fallingbastel—				
Former amts districts:				
Ahlden	28.7	19.04	23.8	14.28
Fallingbastel	35.7	23.8	17.04	16.66
Gifhorn (former amts districts of Fallersleben, Gifhorn, and Meinersen)	35.7	26.18	23.8	19.04
Town of Gifhorn	35.7	23.8	19.04	19.04
Harburg-on-the-Elbe	57.2	35.7	28.5	19.04
Wilstorf, Heimfeld, and Eissendorf	47.6	35.7	28.5	23.8
Other places	35.7	28.5	23.5	19.04
Former amts district of Tastedt	30.94	21.42	19.04	14.28
Tsenhagen	28.5	19.04	14.28	11.9
Lüchow—				
Former amts district of Lüchow	30.94	21.42	19.04	14.28
Town of Lüchow	30.94	21.42	16.66	16.66
Lüneburg	38	23.8	21.42	16.66
Land district of Lüneberg	35.7	23.8	19.04	14.28
Soltau	35.7	23.8	23.8	14.28
Uelzen—				
Former amts districts of Meedingen and Oldenstadt	35.7	23.8	16.66	14.28
Town of Uelzen	35.7	23.8	14.28	14.28
Winsen-on-the-Luhe—				
Former amts districts:				
Winsen	35.7	23.8	17.35	11.9
Geeste	28.5	19.04	14.28	11.9
Town of Winsen-on-the-Luhe	38	23.8	19.04	19.04
Governmental district of Stade.				
Townships:				
Achim (except Hemslingen)	41.88	29.98	23.8	17.86
Hemslingen	53.78	35.7	26.8	21.42
Bremervorde—				
Town of Bremervorde	41.88	23.8	17.86	17.86
Municipality of Elm	42.84	26.8	23.8	19.04
Other parts	41.88	29.98	19.04	14.28

Table showing the daily wages of agricultural laborers in Germany—Continued.

District.	Adults.		Children.	
	Male.	Female.	Male.	Female.
THE KINGDOM OF PRUSSIA—continued.				
Governmental district of Stade—Continued.				
Townships—Continued.				
Blumenthal—	*Cents.*	*Cents.*	*Cents.*	*Cents.*
Municipalities of Aschwarden, Busch, and Hinnebuk	47.6	35.7	28.5	23.8
Other part	47.6	35.7	23.5	17.86
Geestemünde—				
Geestemünde, Geestendorf, Schiffdorf, and Wulsdorf	71.4	41.88	35.7	23.8
Lehe, Langen, and Spaden	71.4	41.88	35.7	23.8
Wanhöden and Wehden	52.3	35.7	28.5	23.8
Former amts district of Dorum	41.88	29.98	26.8	20.46
Other parts	47.6	35.7	28.5	23.8
Stade—				
Town of Stade	47.6	40.38	14.75	11.9
Former amts district of Himmelpforten	42.84	26.8	23.8	19.04
Verden—				
Town of Verden	41.88	29.98	11.9	11.9
Other part	38	28.5	23.5	19.04
Zeven	35.7	28.5	23.5	19.04
Governmental district of Osnabrück.				
Townships:				
Bersenbrück—				
Town of Ornakenbrück	42.84	33.3	14.28	11.9
Former amts districts—				
Bersenbrück	33.3	26.8	17.85	14.28
Füstenau	29.68	17.85	9.52	9.42
Vörden	33.3	26.8	21.42	19.04
Lingen	38	28.5	19.04	11.9
Papenburg	35.7	23.8	17.85	14.85
Meppen:				
Former amts districts—				
Haselünne	35.7	23.8	14.28	9.42
Hümmling	35.7	23.8	14.28	9.52
Town of Meppen	36.8	23.8	16.66	14.28
Other parts of the former amts district of Meppen	35.7	29.68	23.8	.....
Osnabrück	42.84	28.5	26.8	19.04
Land district of Osnabrück	35.7	26.8	21.42	19.04
Wittlage	28.5	21.42	19.04	14.28
Governmental district of Aurich.				
Municipalities of the former amts districts:				
Aurich (except the town of Aurich)	35.7	23.8	17.85	11.9
Emden (except the town of Emden)	36.8	23.8	16.66	14.28
Esens (except the town of Esens)	34.4	21.42	19.04	15.47
Leer	35.7	23.8	17.85	11.9
Norden (except the towns of Norden and Norderney)	36.89	23.8	17.85	15.47
Stickhausen	35.7	23.8	17.85	11.9
Weener	29.68	17.85	14.28	11.9
Wittmund	34.4	21.42	19.04	15.47
Towns:				
Aurich	42.84	33.3	21.42	14.28
Emden	45.2	26.8	13.09	13.09
Esens	35.7	19.04	14.28	11.9
Leer	47.6	35.7	17.85	11.9
Norden	41.77	23.8	23.85	17.85
Wilhelmshaven	52.36	35.7	29.68	23.8
Norderney Island	54.74	35.7	31	23.8

Table showing the daily wages of agricultural laborers in Germany—Continued.

District.	Adults.		Children.	
	Male.	Female.	Male.	Female.
THE KINGDOM OF PRUSSIA—continued.				
Governmental district of Münster.				
Townships:	*Cents.*	*Cents.*	*Cents.*	*Cents.*
Münster	42.84	28.5	16.66	11.9
Ahaus	31	23.5	16.66	14.28
Beckum	39.19	26.8	23.8	19.04
Bochold	47.6	35.7	31	28.5
Kösfeld—	35.7	23.8	19.04	16.66
Town of Dülmen				
Buldern and Hiddingsel	35.7	23.8	21.42	16.66
Other parts	31	23.8	21.42	16.66
Land district of Münster	33.3	23.8	21.42	16.66
Townships:				
Recklinghausen—				
Municipalities of Bottrop, Buer, Gladbeck, Herten, Horst, and Osterfeld, and town of Recklinghausen	54.74	36.8	29.6	23.8
Datteln, Henrichenburg, Horneburg, Oer, Recklinghausen (land district), Luderwich, Waltrop, and Westerholt	42.84	29.6	23.8	17.85
Other parts	36.8	28.5	23.8	14.28
Steinfurt—				
Burgsteinfurt, Rheine, and Barghorst	40.4	28.5	23.8	19.04
Metelen	28.5	23.8	19.04	14.28
Other parts	35.7	28.5	23.8	19.04
Tuklenburg—				
Town of Ibbenbüren	47.6	23.8	21.42	16.66
Other part	35.7	23.8	21.42	16.66
Warendorf	35.7	23.8	21.42	19.04
Other parts	35.7	29.6	19.04	19.04
Governmental district of Minden.				
Township of Bielefeld:				
Town of Bielefeld	42.84	33.3	28.5	19.04
Amts districts—				
Brackwede	40.4	31	23.8	19.04
Dornberg	35.7	23.8	17.85	11.9
Godderbaum	40.7	31	23.5	23.8
Schildesche	38	23.8	14.28	14.28
Uelpen	33.3	21.42	17.85	11.9
District of Büren:				
Amts districts—				
Atteln	42.84	33.3	28.5	19.04
Büren	40.7	31	23.8	19.04
Fürstenberg	35.7	19.04	23.8	11.94
Lichtenau	35.7	17.85	17.85	9.42
Ooynhausen	29.6	17.85	16.66	11.9
Petershagen	33.3	23.8	23.8	23.8
Schlüsselburg	23.8	23.8	20.23	20.23
Windheim	29.6	21.42	11.9	11.9
Town of Salzkotten	35.7	23.8	23.8	19.04
Townships:				
Paderborn—				
Town of Paderborn	38	23.8	19.04	11.9
Amts districts:				
Delbrück	35.7	29.6	23.8	23.8
Kirchberehen	28.5	19.04	11.9	11.9
Lippspring	35.7	23.8	17.85	11.9
Neuhaus	35.7	26.8	23.8	17.85

Table showing the daily wages of agricultural laborers in Germany—Continued.

District.	Adults.		Children.	
	Male.	Female.	Male.	Female.
THE KINGDOM OF PRUSSIA—continued.				
Governmental district of Minden—Continued.				
Townships—Continued.				
Warburg—				
Amts districts:	*Cents.*	*Cents.*	*Cents.*	*Cents.*
Bergholz	28.5	19.04	14.28	14.28
Borgentreich	23.8	14.28	14.28	11.9
Dringenberg	23.8	16.66	11.9	9.42
Peckelsheim	35.7	23.8	17.85	17.85
Warburg	36.8	28.5	23.8	17.85
Town of Warburg	29.69	22.5	17.85	14.28
Wiedenbrück—				
Towns:				
Gütersloh	35.7	26.18	23.8	20.19
Rheda	35.7	26.18	14.28	11.9
Wiedenbrück	28.5	19.04	14.28	11.9
Amts districts:				
Gütersloh	35.7	23.8	17.85	11.9
Herzebrock	35.7	35.7	23.8	23.8
Rheda	28.5	16.66	11.9	9.42
Reckenberg	28.5	19.04	14.28	11.9
Rietberg	29.69	23.8	23.8	17.85
Verl	31	23.8	23.8	17.85
Governmental district of Arnsberg.				
Townships:				
Altena	52.36	35.7	26.58	23.8
Arnsberg	42.84	28.5	21.42	16.66
Bochum, Gelsenkirchen, Hattingen, and land district of Bochum	52.36	35.7	26.18	21.42
Brilon	35.7	23.8	19.04	14.28
Dortmund and Hörde	47.6	26.5	23.8	19.04
Hagen, Schwelm, and land district of Hagen	48.7	33.3	26.5	23.8
Hamm—				
Towns:				
Hamm	41.65	33.3	28.5	19.04
Unna Camen	47.6	28.5	23.8	19.04
Other part	40.4	26.18	23.8	21.42
Iserlohn—				
Town of Iserlohn	52.36	29.69	29.65	19.04
Amts district of Hohenlimburg	52.36	23.8	30.94	19.04
Other parts	42.84	28.5	21.42	16.66
Lippstadt	35.7	23.8	19.04	14.28
Meschede	42.84	28.5	23.8	16.66
Olpe	42.84	29.69	28.5	19.04
Soest	38	28.5	23.8	21.42
Wittgenstein	35.7	26.18	21.42	16.66
Governmental district of Cassel.				
Townships:				
Cassel	50.45	32.84	29.27	21.42
Land district of Cassel	35.7	21.42	21.42	21.42
Eschwege—				
Town of Eschwege	35.7	26.18	21.42	21.42
Other part	28.5	21.42	11.9	9.42
Frankenberg (including the former districts)—				
Vohl	35.7	28.5	23.8	19.04
Fritzlar	33.3	23.8	21.42	19.04

Table showing the daily wages of agricultural laborers in Germany—Continued.

District.	Adults.		Children.	
	Male.	Female.	Male.	Female.
THE KINGDOM OF PRUSSIA—continued.				
Governmental district of Cassel—Continued.				
Townships—Continued.				
Fulda—	*Cents.*	*Cents.*	*Cents.*	*Cents.*
Town of Fulda	39.19	30.94	26.18	21.42
Other part	31	21.42	16.66	14.28
District of Gelnhausen:				
Former district of Orb	35.7	23.8	19.04	14.28
Municipalities of this district	33.3	23.8	21.42	19.04
Townships:				
Gersfeld	28.5	21.42	19.04	16.66
Hanau	41.65	29.69	23.8	16.66
Land district of Hanau—				
Fechenheim, Bergen, Kesselstadt, Oberrodenbach, Wachenbuchen, Bischofsheim, and Dörnegheim	47.6	31	23.8	16.66
Other parts	35.7	26.18	21.42	14.28
Townships:				
Melsungen	28.5	21.42	14.28	11.9
Rinteln	35.7	26.18	23.8	21.42
Rothenburg	31	23.8	21.42	19.04
Schlüchtern	33.3	23.8	19.04	16.66
Schmalkalden	35.7	21.42	19.04	16.66
Witzenhausen	33.3	21.42	19.04	14.28
Wolfhaagen	53.3	23.8	21.42	16.66
Ziegenhain	35.7	26.18	21.42	17.85
Governmental district of Wiesbaden.				
Townships:				
Biedenkopf—				
Municipalities of Krumbach, Fellingshausen, Frankenbach, Hermannstein, Königsberg, Naunheim, Rodheim-on-the-Bieber, and Waldgirmas	47.6	31	23.8	19.04
Other part	35.7	23.8	19.04	14.28
Dilki—				
Municipalities of Allendorf, Bergebersbach, Haiger, Mandeln, Oberscheld, Ritterhausen, Strassebersbach	35.7	19.04	16.66	11.9
Other part	40.4	23.8	19.04	14.28
Oberwalderkreis	40.4	23.8	19.04	14.28
Districts:				
Westerburg	42.84	28.5	23.8	16.66
Lümburg and Unterlahnkreis—				
Municipalities of Lümburg, Ems, Diez, Nassau, Lündenholzhausen, Bergnassau, Scheuern, Freiendiez, Gückingen, Dehm, Dietkirchen, Staffel, Oberbrechen, Dauborn, Eschhofen, Mensfelden, Mühlen, and Nieder-Brechen	42.84	28.5	23.8	19.04
Other municipalities of the districts of Lümburg, Diez, and Nassau	35.7	28.5	23.8	19.04
Municipalities of the former amts district of Nastätten	35.7	23.8	23.8	11.9
Kamberg and Nieder Selters	47.6	28.5	23.8	16.66
Usingen and Obertaunus (town of Frankfort-on-the-Main)—				
Amts district of Usingen	35.7	23.8	19.04	14.28
Municipalities:				
Eckenheim and Seckenbach	38	26.18	26.18	16.66
Ginnheim, Berckersheim, Traunheim, and Seckbach	38	26.18	26.18	16.66
Bonnames and Hausen	52.36	28.5	23.8	19.04
Oberrad and Niederad	57.1	33.3	28.5	23.8
Nieder-Ursel	35.7	23.8	17.85	14.28
Heddernheim	47.6	28.5	19.04	14.28
Rödelheim	47.6	28.5	19.04	14.28

Table showing the daily wages of agricultural laborers in Germany—Continued.

District.	Adults.		Children.	
	Male.	Female.	Male.	Female.
THE KINGDOM OF PRUSSIA—continued.				
Governmental district of Wiesbaden—Continued.	*Cents.*	*Cents.*	*Cents.*	*Cents.*
Township of Wiesbaden	49.9	33.3	23.8	15.38
Land district of Wiesbaden:				
Municipalities of the amts district of Wiesbaden (except Wildsachsen)	47.6	23.5	19.04	14.28
Municipality of Wildsachsen	35.7	23.8	19.04	14.28
Amts district of Hochheim	47.6	28.5	19.04	14.28
Governmental district of Coblentz.				
Townships:				
Adenau	31	23.8	19.04	14.28
Ahrweiler	35.7	28.5	23.8	19.04
Altenkirchen	42.8	28.5	23.8	23.8
Coblentz	42.8	28.5	23.8	9.42
Land district of Coblentz	42.8	26.18	23.8	16.66
Cochem—				
Burgomasteries of Lutzerath and Kaisersesch	33.3	23.8	16.66	11.9
Other part	42.8	28.5	21.42	14.28
St. Goar—				
Town of St. Goar and the burgomasteries of Bacharach, Brodenbach, Bappard, Nieder-Heimbach, and Oberwesel	42.8	28.5	23.8	16.66
Other part	35.7	26.18	23.8	16.66
Kreuznach	35.7	23.8	21.42	16.66
Mayen—				
Burogmastery of Burgbrahl and land district of Mayen	38	26.18	19.04	14.28
Other part	42.8	28.5	19.04	14.28
Meisenheim	33.3	28.5	23.8	21.42
Neuwied—				
Burgomasteries:				
Neuwied, Engers, Heddesdorf, Leutesdorf, Lintz, and Unkel	42.8	23.8	19.04	14.28
Anhausen, Asbach, Diersdorf, Neuerburg, Neustadt, Niederwambach, and Puderbach	35.7	23.8	19.04	14.28
Simmern	35.7	28.5	19.04	16.66
Wetzlar—				
Burgomasteries:				
Wetzlar and Braunsfels	42.8	23.5	23.8	14.28
Asslar, Atzbach, Greifenstein, Hohen Solms, Launsbach, Rechtenbach, and Schöffengrund	35.7	23.5	23.8	14.28
Zell—				
Burgomasteries of Zell (town and land district) and Trarbach	40.4	28.5	26.18	19.04
Other part	35.7	26.18	21.42	16.66
Governmental district of Dusseldorf.				
Townships:				
Barmen	57.1	35.7	23.8	19.04
Cleves—				
Town of Goch	38	23.9	16.66	14.28
Other part	33.3	21.42	16.66	14.28
Crefeld	57.1	35.7	28.5	23.8
Land district of Crefeld	45.2	33.3	23.8	19.04
Dusseldorf	57.1	35.7	28.5	19.04
Land district of Dusseldorf	47.6	33.3	23.8	19.04
Duisburg	57.1	35.7	28.5	19.04
Elberfeld	57.1	35.7	23.8	19.04
Essen	57.1	35.7	28.5	19.04
Land district of Essen	52.3	33.3	23.8	19.04
Geldern	40.4	28.5	19.04	16.66

Table showing the daily wages of agricultural laborers in Germany—Continued.

District.	Adults.		Children.	
	Male.	Female.	Male.	Female.
THE KINGDOM OF PRUSSIA—continued.				
Governmental district of Dusseldorf—Continued.				
Townships—Continued.	*Cents.*	*Cents.*	*Cents.*	*Cents.*
München-Gladbach	47.6	35.7	23.8	19.04
Grevenbroich	42.8	28.5	23.8	19.04
Kempen	42.8	28.5	19.04	16.66
Lennep—				
Towns of Lüttringhausen and Ronsdorf	52.3	35.7	23.8	19.04
Burgomastery of Dabringhausen	42.8	28.5	42.8	19.04
Other parts	47.6	33.3	23.8	19.04
Mettmann	47.6	35.7	23.8	19.04
Moers	38	25.5	19.04	16.66
Mülheim-am-Ruhr	52.3	35.7	23.8	19.04
Neuss—				
Town of Neuss	47.6	33.3	23.8	19.04
Other part	42.8	28.5	23.8	19.04
Rees—				
Towns:				
Wesel	47.6	33.3	23.8	19.04
Emmerich and Issenburg, and community of Hurl	42.8	28.5	23.8	19.04
Remscheid	52.2	35.7	23.8	19.04
Ruhrort—				
Burgomastery of Dinslaken, town and land district of Duisburg, and land districts of Gahlen and Goettersiwickerhamm	47.6	38.3	23.8	19.04
Other part	52.3	35.7	23.5	19.04
Solingen—				
Towns of Dorp, Gräfrath, Höhscheid, Merscheid, Solingen, and Wald	52.3	35.7	23.5	19.04
Other part	42.8	28.5	23.5	19.04
Governmental district of Cologne.				
Townships:				
Bonn—				
Town of Bonn and burgomastery of Godesberg	47.6	28.5	23.5	19.04
Other part	35.7	28.5	23.5	19.04
Bergheim	35.7	28.5	23.5	19.04
Euskirchen	35.7	23.5	19.04	14.28
Gummersbach—				
Burgomasteries:				
Gummersbach and Neustadt	47.6	33.3	23.8	19.04
Gimborn, Marienheide, Ründeroth, and Wiehl	47.6	28.5	23.8	19.04
Other part	35.7	23.8	19.04	14.28
Cologne	59.5	35.7	35.7	19.04
Land district of Cologne—				
Towns of Deutz, Kalk, and Longerich	47.6	33.3	23.8	19.04
Burgomasteries:				
Efferen and Rondorf	47.6	28.5	23.8	19.04
Brühl, Freimersdorf, and Stommelen	35.7	23.5	23.8	17.85
Other parts	42.8	28.5	23.8	19.04
Mülheim-am-Ruhr—				
Town of Mülheim-am-Ruhr	59.5	35.7	35.7	23.8
Burgomastery of Rösrath	35.7	23.8	14.28	11.9
Other parts	42.8	28.5	23.8	19.04
Rheinbach	35.7	23.8	19.04	14.28
Sieg—				
Town and burgomastery of Siegburg and town of Königswinter	47.6	23.8	19.04	14.28
Burgomasteries of Eitarf, Honnef, and Menden	42.8	23.8	19.04	14.28
Other parts	35.7	23.8	17.85	11.9

Table showing the daily wages of agricultural laborers in Germany—Continued.

District.	Adults.		Children.	
	Male.	Female.	Male.	Female.
THE KINGDOM OF PRUSSIA—continued.				
Governmental district of Cologne—Continued.				
Townships—Continued.	*Cents.*	*Cents.*	*Cents.*	*Cents.*
Waldbröl	35.7	23.8	17.85	11.9
Wipperfürth—				
Town of Wipperfürth	47.6	35.7	23.8	19.04
Other part	38	23.8	17.85	11.9
Governmental district of Treves.				
Townships:				
Bernkastel—				
Towns of Bernkastel, Lieser, and Zeltingen and municipality of Graach	40.4	26.18	26.18	19.04
Burgomasteries of Bernkastel (except the municipality of Graach), Müllheim, Neumagen, Morbach, Rhannen, Thalfang, and Wirschweiler	33.3	26.18	23.8	19.04
Bitburg	35.7	28.5	19.04	19.04
Daun	35.7	23.5	21.42	19.04
Merzig	41.5	26.18	23.8	14.28
Ottweiler	42.8	26.18	23.8	14.28
Prüm—				
Town of Prüm	47.6	35.7	23.8	23.8
Burgomasteries	35.7	28.5	17.85	16.66
Saarbrücken	42.8	26.18	23.8	14.28
Saarburg	33.3	22.61	19.04	16.66
Saar-Louis	42.8	33.3	14.28	14.28
Treves—				
Municipalities of Conz and Merzlich	40.4	28.5	19.04	14.28
Other part	35.7	23.5	19.04	14.28
St. Wendel—				
Town and burgomastery of St. Wendel	47.6	23.5	23.8	11.9
Burgomasteries:				
Alsweiler and Oberkirchen	42.8	23.5	23.8	14.28
Baumholder and Burglichtenberg	38	29.4	23.8	19.04
Grumbach and Sien	35.7	26.18	23.8	19.04
Wittlich	31	23.8	19.04	14.28
Governmental district of Aix la Chapelle.				
Townships:				
Aix la Chapelle	47.6	28.5	23.8	16.66
Aachen—				
Burgomasteries of Brand, Burtscheid, Büsbach, Cornelimünster, Eschweiler, Forst, Gressenich, Kürzweiler, Stolberg, and Walheim	47.6	28.5	23.8	16.66
Other part	42.8	28.5	19.04	14.28
Düren—				
Burgomasteries:				
Birgel, Drove, Lamersdorf, Niddeggen, Nathberg, Pier, Stockheim, and Strass-Bergstein	42.8	28.5	21.42	16.66
Volz and Sievernich	33.3	23.8	19.04	14.28
Other part	38	23.8	19.04	14.28
Schleiden—				
Burgomasteries:				
Bleibnir, Eicks, Gemünd, Harperscheid, Heimbach, Hellenthal, Hallerath, Schleiden Udenbreth, Vussem, and Weyer	42.8	28.5	21.42	16.66
Holzmülhelm, Tondorf, and Lammersdorff	38	26.18	19.04	16.66
Other part	35.7	23.8	19.04	14.28

Table showing the daily wages of agricultural laborers in Germany—Continued.

District.	Adults.		Children.	
	Male.	Female.	Male.	Female.
THE KINGDOM OF PRUSSIA—continued.				
Governmental district of Aix la Chapelle—Continued.				
Townships—Continued.				
Eupen—	*Cents.*	*Cents.*	*Cents.*	*Cents.*
Town of Eupen	42.8	28.5	23.8	23.8
Other part	47.6	28.5	17.85	17.85
Other parts	35.7	23.8	21.42	16.66
Hohenzollern.				
Upper amts districts:				
Sigmaringen (except the town of Sigmaringen)	35.7	23.8	19.04	14.28
Town of Sigmaringen	38	23.8	19.04	14.28
Gammertingen	35.7	23.8	19.04	14.28
Haigerlach	35.7	23.8	19.04	14.28
Hechingen (except the town of Hechingen)	35.7	23.8	19.04	14.28
Town of Hechingen (further factory workmen and women, particular conditions)	47.6	28.5	26.18	14.28
KINGDOM OF BAVARIA.				
Governmental district of Upper Bavaria.				
Towns:				
Munich	54.74	35.7	26.18	23.8
Freising	35.7	23.8	19.04	16.66
Landsberg	42.8	28.5	19.04	16.66
Rosenheim	45.18	35.7	23.8	21.42
Traunstein	47.6	35.7	23.8	19.04
Extents of jurisdiction:				
Aichach	40.4	31	23.8	19.04
Alt-Oetting, Neu-Oetting, and Burghausen	42.8	31	19.04	16.66
Other part	31	26.18	19.04	16.66
Berchtesgaden:				
Municipality and Reichenhall	47.6	35.7	23.8	19.04
Other part	35.7	23.8	16.66	11.9
Bruck	33.3	23.8	19.04	19.04
Dachau	40.4	31	23.8	19.04
Ebersberg	38	31	23.8	16.66
Erding	35.7	28.5	21.42	16.66
Freising (except the town of Freising)	35.7	28.5	21.42	16.66
Friedberg—				
Municipality of Lechhausen	42.8	33.3	16.66	14.28
Other part	33.3	23.8	16.66	14.28
Garmisch—				
Oberammergau	52.3	35.7	31	23.8
Oberau	47.6	35.7	31	23.8
Ettal, Garmisch, and Partenkirchen	47.6	35.7	28.5	23.8
Other parts	38	28.5	23.8	16.66
Ingolstadt (except the town of Ingolstadt)	38	28.5	21.42	16.66
Landsberg (except the town of Landsberg)	35.7	28.5	21.42	19.04
Laufen	33.3	26.18	19.04	16.66
Miesbach	45.18	35.7	26.18	21.42
Mühldorf	31	26.18	19.04	16.66
Münich (except the town of Münich)	47.6	35.7	26.18	21.42
Amts districts:				
Stamberg	40.4	31	23.8	19.04
Wolpotshausen	40.4	31	23.8	19.04
Pfaffenhafen	38	28.5	21.42	16.66
Rosenheim (except the town of Rosenheim)	38	31	23	16.66
Schöngau	40.4	31	21.42	16.66
Schrobenhausen	35.7	28.5	14.28	11.9

Table showing the daily wages of agricultural laborers in Germany—Continued.

District.	Adults.		Children.	
	Male.	Female.	Male.	Female.
KINGDOM OF BAVARIA—continued.				
Governmental district of Upper Bavaria—Continued.				
Townships—Continued.				
Tölz:	*Cents.*	*Cents.*	*Cents.*	*Cents.*
Benediktbeuren, Biehl, Koehl, and Tölz	47.6	35.7	23.8	19.04
Traunstein (except the town of Traunstein)	38	28.5	21.42	16.66
Wasserberg	33.3	26.18	19.04	16.66
Weilheim	45.18	31	23.8	16.66
Governmental district of Lower Bavaria.				
Towns:				
Deggendorf, Landshut, and Straubing	35.7	28.5	23.8	19.04
Passau	33.3	23.8	19.04	14.28
Extents of jurisdiction:				
Dingelfing, Eggenfelden, Griesbach, Landau, Landshut, Mallersdorf, Pfarrkirchen, Rottenburg, and Vilsbiburg	35.7	28.5	23.8	19.04
Bogen, Deggendorf, Kelheim, and Passau	33.3	23.8	19.04	14.28
Wegscheid	28.5	21.42	16.66	11.9
Gafenau and Kötzting	23.5	19.04	14.28	9.42
Governmental district of Palatinate.				
Cantons:				
Bergzabern, Blieskastel, Dürkheim, Edenkolen, Frankenthal, Kaiserslautern, Landau, Ludwigshafen, Neustadt-an-der-Hardt, Pirmasens, Speyer, Ingbert, and Zweibrücken	38	23.8	17.85	14.28
Annweiler, Dahn, Germersheim, Göllheim, Hamburg, Hornbach, Kandel, Kirchheim-Bolanden, Kusel, Landstuhl, Lauterecken, Moschel, Otterberg, Rockenhausen, Waldfischbach, Waldmohr, Winnweiler, and Wolfstein	33.3	23.8	17.85	14.28
Governmental district of Upper Palatinate and Regensburg.				
Townships:				
Amberg	35.7	28.5	19.04	14.28
Regensburg	33.3	21.42	19.04	11.9
Extents of jurisdiction:				
Amberg	23.8	21.42	11.9	11.9
Beilngries	31	26.18	19.04	16.66
Burglengenfeld	28.5	21.42	14.28	11.9
Cham	23.8	19.04	11.9	9.42
Eschenbach	23.8	19.04	11.9	9.42
Kemnath	23.8	19.04	16.66	14.28
Nabburg	23.8	19.04	11.9	9.42
Neumarkt	33.3	26.18	19.04	16.66
Neunberg	28.5	23.8	16.66	11.9
Regensburg	31	23.8	11.9	9.42
Stadt-am-Hof—				
Rainshausen, Sallern, Zeitbern, Schwabelweiss, Stadt-am-Hof, Steinweg, Tegernheim, and Sinzinger	35.7	23.8	21.42	14.28
Other part	28.5	21.42	16.66	11.9
Amts districts:				
Sulzbach	28.5	19.04	11.9	9.42
Tirschenreuth	28.5	19.04	14.28	11.9
Vohenstrauss	33.3	23.8	19.04	16.66
Waldmünster	19.04	14.28	11.9	9.42
Governmental district of Upper Franconia.				
Townships:				
Bamberg	35.7	28.5	23.8	16.66
Baireuth	35.7	26.18	19.04	11.9
Hof	38	23.8	19.04	14.28

Table showing the daily wages of agricultural laborers in Germany—Continued.

District.	Adults.		Children.	
	Male.	Female.	Male.	Female.
KINGDOM OF BAVARIA—continued.				
Governmental district of Upper Franconia—Continued.				
Amts districts:	*Cents.*	*Cents.*	*Cents*	*Cents.*
Bamberg	29	23.8	16.66	14.28
Gaussdt	40.4	28.5	23.8	23.8
Other part	31	23.8	16.66	14.28
Baireuth	23.8	19.04	14.28	11.9
Berneck	28.5	23.8	19.04	16.66
Ebermannstadt	31	29.4	21.42	19.04
Forchheim—				
Town of Forchheim	35.7	28.5	23.8	16.66
Districts:				
Forchheim	31	26.18	21.42	19.04
Gräfenberg	28.5	23.8	19.04	16.66
Hochstadt-on-the-Aisch	27.4	21.42	16.66	14.28
Hof	28.5	16.66	14.28	11.9
Kronach	28.5	21.42	16.66	14.28
Kulmbach—				
Town of Kulmbach	38	31	31	16.66
Districts:				
Kulmbach	28.5	23.8	19.04	14.28
Thurnau	23.5	19.04	14.28	11.9
Lichtenfels	28.5	23.8	16.66	14.28
Towns:				
Münchberg	38	31	28.5	23.8
Holmbrechts	33.3	23.8	23.8	19.04
Other part	28.5	23.8	19.04	14.28
Naila	31	23.8	16.66	14.28
Pegnitz	23.8	19.04	14.28	11.9
Rehau	27	21.42	16.66	14.28
Stadt-Steinach	28.5	23.8	19.04	17.85
Staffelstein	31	26.18	21.42	19.04
Wunsiedel—				
Towns of Wunsiedel, Weissenstadt, Kirchenlamitz, Redwitz, Thiersheim, and Thierstein	35.7	23.8	21.42	14.28
Other part	28.5	21.42	14.28	11.9
Governmental district of Middle Franconia.				
Towns:				
Auspach	35.7	23.8	19.04	14.28
Dinkelsbühl	31	24.9	16.66	14.28
Eichstädt	35.7	23.8	19.04	14.28
Erlangen	40.4	23.8	16.66	11.9
Fürth	47.6	28.5	23.8	20.35
Nuremberg	47.6	31	31	21.42
Rothenburg	28.5	23.8	14.28	11.9
Schwabach	35.7	23.8	11.9	11.9
Weissenburg	42.8	28.5	11.9	9.42
Amts districts:				
Anspach (except the above-mentioned towns)	28.5	21.42	14.28	13.1
Dinkelsbühl (except the above-mentioned towns)	35.7	28.5	23.8	19.04
Eichstädt (except the above-mentioned towns)	31	21.42	19.04	16.66
Erlangen (except the above-mentioned towns)	35.7	23.8	17.85	16.66
Feuchtwang	33.3	26.18	19.04	14.28
Fürth (except the town of Fürth)	38	28.5	23.8	19.04
Gunzenhausen	38	29.6	23.8	19.04
Nuremberg—				
District of Nuremberg	47.6	31	21.42	16.66
District of Altdorf	35.7	23.8	16.66	11.9

Table showing the daily wages of agricultural laborers in Germany—Continued.

District.	Adults.		Children.	
	Male.	Female.	Male.	Female.
KINGDOM OF BAVARIA—continued.				
Governmental district of Middle Franconia—Continued.				
Amts districts—Continued.	Cents.	Cents.	Cents.	Cents.
Schwabach	38	26.18	19.04	14.28
Uffenheim	41.7	33.3	23.8	19.04
Weissenburg (except the town of Weissenburg)	35.7	28.5	19.04	14.28
Town of Weissenburg	35.7	28.5	19.04	14.28
Governmental districts of Lower Franconia and Aschaffenburg.				
Towns:				
Aschaffenburg	42.8	26.18	21.42	16.66
Kitzingen	38	28.5	21.42	19.04
Schweinfurt	45.2	33.3	23.8	19.04
Würzburg	40.4	33.3	23.8	17.85
Amts districts:				
Alzenau	28.5	21.42	16.66	14.28
Aschaffenburg (except the town of Aschaffenburg)	33.3	23.8	19.04	16.66
Büsckenau	26.18	21.42	11.9	9.42
Ebern	31	23.8	16.66	14.28
Gerolzhofen	31	23.8	19.04	16.66
Hammelburg	28.5	23.8	19.04	16.66
Hassfurt	33.3	23.8	19.04	16.66
Kalstadt	33.3	26.18	21.42	16.66
Kissingen	28.5	23.8	19.04	16.66
Kitzingen (except the town of Kitzingen)	31	23.8	16.66	14.28
Königshofen	31	23.8	16.66	14.28
Lohr	28.5	21.42	16.66	11.9
Heidenfeld	33.3	23.8	16.66	11.9
Mellrichstadt	31	23.8	19.04	16.66
Miltenberg	33.3	23.8	21.42	16.66
Neustadt-ân-der-Saale	31	23.8	19.04	16.66
Obernburg	35.7	26.18	21.42	19.04
Ochsenfurt	35.7	28.5	17.85	14.28
Schweinfurt (except the town of Schwienfurt)	35.7	28.5	19.04	14.28
Würzburg (except the town of Würzburg)	33.3	28.8	19.04	15.37
Governmental districts of Swabia and Neuburg.				
Towns:				
Augsburg	42.8	31	23.8	23.8
Dillingen	35.7	23.8	19.04	15.47
Donauwörth	33.3	23.8	19.04	14.28
Günzburg	28.5	21.42	21.42	17.85
Kaufbeuren	42.8	33.3	19.04	19.04
Kempten	42.8	29.6	23.8	19.04
Landau	63.07	41.5	35.7	23.8
Memmingen	38	28.5	19.04	14.28
Neuburg (on the Danube)	40.4	24.9	16.66	13
Nördlingen	40.4	35.7	19.04	16.66
Amts districts:				
Augsburg (except the town of Augsburg)—				
Municipalities:				
Göggingen and Oberhausen	42.8	33.3	23.8	19.04
Haunstetten	40.4	33.3	23.8	16.66
Schwabmünchen	40.4	28.5	23.8	23.8
Stadtbergen	40.4	35.7	28.5	23.8
Other part	38	28.5	23.8	19.04
Dillingen	35.7	28.5	19.04	14.28
Donauwörth	35.7	23.8	19.04	14.28

Table showing the daily wages of agricultural laborers in Germany—Continued.

District.	Adults.		Children.	
	Male.	Female.	Male.	Female.
KINGDOM OF BAVARIA—continued.				
Governmental districts of Swabia and Neuburg—Continued.				
Amts districts—Continued.	*Cents.*	*Cents.*	*Cents.*	*Cents.*
Füssen	45.2	35.7	23.8	20.23
Lindau (except the town of Lindau)	47.6	35.7	23.8	20.23
New Ulm	38	21.42	16.6	15.47
Nördlingen (except the town of Nördlingen)	39.19	26.18	19.04	14.28
Oberdorf	33.3	26.18	19.04	16.66
Senthofen—				
Municipalities:				
Bleichach	47.6	40.4	35.7	23.8
Inmerstadt	47.6	33.3	19.04	11.9
Senthofen	42.8	33.3	23.8	19.04
Other municipalities	42.8	31	22.7	17.85
Wertingen	39.19	28.5	23.8	19.04
Zumarshausen	35.7	28.5	21.42	16.66
KINGDOM OF SAXONY.				
District of Bautzen.				
Districts of Löbau, Bautzen, Camenz, and Zittau (except the following towns)	28.5	19.04	14.28	11.9
Bautzen	35.7	23.8	23.8	14.28
Camenz	33.3	23.8	19.04	14.28
Löbau	35.7	23.8	19.04	14.28
Zittau	42.8	28.5	21.42	19.04
Children from 12 to 14 years	.....	.....	8.23	7.25
Pulsnitz	35.7	23.8	14.28	11.9
Bernstadt	35.7	23.8	17.85	11.9
Children from 12 to 14 years	.....	.....	17.85	11.9
Bischofswerda (children from 12 to 14 years)	.....	.....	5.95	5.95
District of Dresden.				
Dresden, Altstadt (except the town of Dresden)	40.4	23.8	16.66	14.28
Children from 12 to 14 years	.....	.....	4.76	4.76
Löbau (children from 12 to 14 years)	.....	.....	9.49	9.49
Plauen (children from 12 to 14 years)	.....	.....	7.14	7.14
Dresden, Neustadt (except the towns of Dresden and Radeberg):				
Municipalities of Loschwitz, Weisser Hirsch, Wachwitz, Bühlau, Rochwitz, Fischhaus, Hasterwitz, Niederpayritz, Pillnitz, Oberpayritz, Sölerigen, Rockau, Helfenberg, and Gennsdorf	38	23.8	19.04	14.28
Schönfeld, Reitzendorf, Zaschendorf, Pappritz, Malschendorf, Krieschendorf, Cunnendorf, Schullwitz, Pohrsberg, Weissig, and Ullersdorf	28.5	19.04	14.28	11.9
Eisenberg, Moritzburg, Reichenberg, Dippeldsdorf, Buchholz, Wahnsdorf, Bondorf, Wilschdorf, Rähnitz, Klatsche, and Schloss Moritzburg	35.7	23.8	19.04	14.28
Pieschen, Trachenbege, Wild Man, Trachau, Mikla, and Uebigan	38	23.8	19.03	16.66
Radebeul, Kaditz, Serkowitz, Oberlössnitz, Kötzschenbroda, and Zltschewitz	35.7	23.8	19.04	14.28
Striessen	42.8	28.5	21.42	16.66
Blasewitz, Grilma, Seidnitz, Laubegast, and Tolkewitz	38	23.8	19.04	14.28
Other parts	28.5	16.66	11.9	11.9
Pirna and Schandau	35.7	19.04	16.66	11.9
Gottleuba (children from 12 to 14 years)	.....	.....	4.76	4.76
Dippoldiswalde	33.3	19.04	16.66	11.9
Dresden	42.8	28.5	21.42	16.6
Freiberg	35.7	19.04	16.66	14.28

Table showing the daily wages of agricultural laborers in Germany—Continued.

District.	Adults.		Children.	
	Male.	Female.	Male.	Female.
KINGDOM OF SAXONY—continued.				
District of Dresden—Continued.	*Cents.*	*Cents.*	*Cents.*	*Cents.*
Grossenhain	35.7	19.04	16.66	14.28
Königstein	35.7	19.04	16.66	11.9
Lommatsch and Meissen	35.7	19.04	11.9	11.9
Neustadt, near Stolpen	35.7	23.8	11.6	14.28
Nossen	35.7	19.04	11.9	11.9
Children extra	.....	.....	7.14	7.14
Pirna	35.7	19.04	16.6	11.9
Radeberg	38	26.18	16.6	16.6
Riesa	33.3	19.04	19.94	14.28
Saida	31	19.04	14.28	11.9
Schandau	35.7	19.04	17.85	11.9
Sebnitz	35.7	28.5	17.85	14.28
Children extra	.....	.....	5.89	5.89
Meissen (children extra)	.....	.....	9.42	9.42
Leipsic.				
Town of Leipsic and environs	47.6	32.1	20.1	20.1
District of Leipsic (except the town of Leipsic)	35.7	23.8	20.1	20.1
Towns:				
Borna	35.7	20.1	20.1	20.1
Groitzsch	35.7	23.8	20.1	20.1
Pegau	35.7	23.8	23.8	20.1
Grimma	35.7	19.04	19.04	14.28
Winzen	35.7	20.1	15.39	11.9
Oschatz	35.7	23.5	14.28	14.28
Döbeln	32.19	20.23	20.23	15.47
Leisnig	35.7	20.23	20.23	15.47
Waldheim	32.19	23.8	20.23	15.47
Mittweida	35.7	23.8	17.85	15.47
Penig	38	28.5	23.8	23.8
Children from 12 to 14 years	.....	.....	5.89	5.89
Rochlitz	35.7	23.8	19.04	19.04
Brugstädt	35.7	23.8	17.85	15.47
Geringswalde	31	19.04	14.23	14.28
Lunzenau	35.7	23.8	20.23	15.47
Zwickau.				
Annaberg	28.5	23.8	19.04	14.28
Auerbach:				
Falkenstein, Lengenfeld, and Treuen	28.5	21.42	19.04	14.28
Auerbach and Klingenthal	33.3	21.42	19.04	14.28
Chemnitz:				
Limbach and Stolberg	35.7	23.8	19.04	14.28
Chemnitz	38	26.18	23.8	19.04
Flöha (except the below-mentioned towns)	35.7	21.42	19.04	14.28
Glauchau (except the below-mentioned towns)	35.7	23.8	19.04	14.28
Marienberg (except the below-mentioned towns)	31	21.42	19.04	14.28
Oelsnitz (except the below-mentioned towns)	23.8	16.66	11.9	11.9
Plauen (except the below-mentioned towns)	28.5	19.04	19.04	11.9
Reichenbach	35.7	23.8	23.8	19.04
Schwarzenberg	35.7	19.04	19.04	14.28
Hartenstein, Kirchberg, and Wildenfels	33.3	23.8	16.66	11.9
Crimmitzschau, Werdau, and Zwickau	38	28.5	19.04	14.28
Towns:				
Adorf	28.5	19.04	14.28	14.28
Annaberg	38	28.5	28.5	19.04
Auerbach	35.7	23.5	21.42	14.28

Table showing the daily wages of agricultural laborers in Germany—Continued.

District.	Adults.		Children.	
	Male.	Female.	Male.	Female.
KINGDOM OF SAXONY—continued.				
Zwickau—Continued.				
Towns—Continued.	*Cents.*	*Cents.*	*Cents.*	*Cents.*
Buchholz	33.3	23.5	19.42	14.28
Chemnitz	47.6	28.5	23.8	21.42
Crimmitzschau	42.8	28.5	23.8	21.42
Ehrenfriedersdorf	35.7	23.5	19.04	14.28
Eibenstock	38	23.5	19.04	14.28
Falkenstein	31	21.42	19.04	14.28
Frankenberg	35.7	23.8	19.04	14.28
Geyer	31	21.42	19.04	14.28
Glauchau	42.8	28.5	19.04	14.28
Hohenstein	35.7	23.5	19.04	14.28
Lengenfeld	35.7	23.5	19.04	14.28
Lichtenstein	35.7	23.5	19.04	14.28
Limbach	38	33.3	21.42	16.66
Lössnitz	35.7	23.8	19.04	14.28
Marienberg	31	21.42	19.04	14.28
Markneukirchen	35.7	23.8	23.8	14.28
Merane	35.7	28.5	19.04	14.28
Neustädtel	35.7	23.8	19.04	14.28
Oederan	35.7	23.8	23.8	14.28
Oelsnitz	33.3	23.8	19.04	14.28
Plauen	38	28.5	19.04	19.04
Reichenbach	42.8	33.3	23.8	21.42
Schneeberg	35.7	23.8	19.04	14.28
Schwarzenberg	35.7	23.8	19.04	14.28
Stollberg	35.7	23.8	21.42	14.28
Treuen	28.5	21.42	19.04	14.28
Thum	35.7	23.8	19.04	14.28
Waldenburg	35.7	23.8	23.8	14.28
Werdau	35.7	23.8	23.8	14.28
Zschoppau	35.7	28.5	23.8	14.28
Zwickau	42.8	28.5	23.8	21.42
Kändler	.....	.....	9.42	9.42
Reichenbrand	.....	.....	9.42	9.42
Neustädtel	.....	.....	9.42	9.42
KINGDOM OF WÜRTEMBERG.				
District of Neckar.				
Upper amts districts:				
Backnang	38	23.8	14.28	14.28
Besigheim	38	23.8	23.8	17.85
Böblingen—				
Sickfund Böblingen	35.7	23.7	22.06	20.1
Sickfund Sindelfingen	31.41	22.84	20.94	15.7
Brackenheim	38	28.5	28.5	19.04
Cannstadt	47.6	33.3	23.5	16.66
Esslingen—				
Town of Esslingen	47.6	28.5	23.5	16.66
Other part	42.8	31	23.5	16.66
Heilbronn—				
Town of Heilbronn	47.6	28.5	23.5	16.66
Other part	40.4	26.18	23.5	16.66
Leonberg	35.7	23.8	28.5	19.04
Ludwigsburg	47.6	35.7	23.5	19.04
Marbach	42.8	23.8	19.08	14.28

Table showing the daily wages of agricultural laborers in Germany—Continued.

District.	Adults.		Children.	
	Male.	Female.	Male.	Female.
KINGDOM OF WÜRTEMBERG—continued.				
District of Neckar—Continued.				
Upper amts districts—Continued	*Cents.*	*Cents.*	*Cents.*	*Cents.*
Maulbronn	42.8	23.5	23.8	14.28
Neckarsulm	42.8	23.5	19.04	14.28
(Average daily wages for workmen: 14.28, 23.8, 38, 52.3, and 80.92 cents.)				
Town of Stuttgart	52.3	33.3	23.5	16.6
Upper amts districts:				
Stuttgart	47.6	35.7	23.5	19.04
Vaihingen	35.7	28.5	23.5	16.6
Waiblingen	42.8	28.5	19.04	14.28
Weinsberg	35.2	23.5	23.8	19.04
District of Schwarzwald.				
Upper amts districts:				
Bolingen—				
Bolingen, Burgfelden, Dürrwangen, Endingen, Engstlatt, Erlaheim, Erzingen, Frommau, Geislingen, Heselwangen, Hasingen, Laufen, Stockhausen, Streichen, Thünügen, Underdidigsheim, Waldstetten, Weilheim, and Zillhausen	28.5	19.04	14.28	8.3
Bitz	28.5	19.04	11.9	5.95
Ebingen	42.8	26.18	19.04	14.28
Onstmettingen	28.5	19.04	11.9	5.95
Thailfingen, Pfeffingen, and Truchtelfingen	28.5	19.04	14.28	8.3
Winterlingen	28.5	16.66	11.9	5.95
Calw	47.6	33.3	28.5	21.42
Freudenstadt	40.4	26.18	23.8	19.04
Herrenberg	38	28.5	31	23.8
Horb—				
District of Horb	35.7	26.18	19.04	16.66
Municipality of Horb	38	26.18	19.04	19.04
Factory of Mühlen	40.4	23.8	23.8	14.28
Nagold	35.7	23.8	21.42	17.85
Neuenburg	47.6	28.5	23.8	19.04
Nürtingen	47.6	28.5	23.8	19.04
Tutlingen	31	19.04	19.04	19.04
Trassingen	35.7	17.85	17.85	17.85
Urach	38	28.5	23.8	19.04
(Average daily wages for workmen: 83.30, 65.45, 53.55, 41.6, 29.6, and 17.85 cents.)				
District of Tagst.				
Upper amts districts:				
Aalden	38	23.8	11.9	11.9
Krailsheim	35.7	23.8	14.28	14.28
Ellwangen	35.7	23.8	19.04	14.28
Galldorf	33.3	21.42	16.66	11.9
Gerabronn	35.7	23.8	19.04	14.28
Town of Gmünd	42.4	33.3	19.04	11.9
Other part	38	28.5	19.04	11.9
Hall	38	28.5	19.04	19.04
Heidenheim	38	26.18	19.04	19.04
Künzelsau	35.7	26.18	16.66	14.28
Mergentheim	38	23.8	19.04	14.28
Neresheim	28.5	21.42	11.9	9.42
Oehringen	47.6	38	38	28.5
Schorndorf	42.4	21.42	28.5	14.28
Welsheim	35.7	23.8	19.04	14.28

Table showing the daily wages of agricultural laborers in Germany—Continued.

District.	Adults.		Children.	
	Male.	Female.	Male.	Female.
KINGDOM OF WÜRTEMBERG—continued.				
District of Donau.				
Upper amts districts:	*Cents.*	*Cents.*	*Cents.*	*Cents.*
Bieberach	38	23.8	23.8	16.66
Town of Bieberach	42.8	28.5	23.8	16.66
Ravensburg	33.3	19.04	14.28	11.9
(Average daily wages for workmen: 47.6, 35.7, and 19.04 cents.)				
Riedlingen	31	21.42	19.04	16.66
(Average daily wages for workmen: 40.4, 28.5, and 20.19 cents.)				
Saalgau	38	21.42	23.8	16.66
(Average daily wages for workmen: 47.6, 35.7, and 23.8 cents.)				
Tettnang	40.4	27.37	27.37	19.04
(Average daily wages for workmen: 47.6, 28.5, and 19.04 cents.)				
Ulm	59.5	33.3	23.8	16.66
(Average daily wages for workmen: 47.6, 33.3, and 23.8 cents.)				
Waldsee	35.7	23.8	19.04	14.28
(Average daily wages for workmen: 47.6, 28.5, and 19.04 cents.)				
Wangen	40.4	23.8	19.04	14.28
(Average daily wages for workmen: 47.6, 35.7, and 23.8 cents.)				
GRAND DUCHY OF BADEN.				
Amts districts:				
Achern—				
Town of Achern	47.6	28.5	23.8	19.04
Other part	42.8	28.5	23.8	19.04
Adelsheim	35.7	23.8	21.42	16.66
Baden (except the town of Baden)	40.4	26.18	23.8	21.42
Town of Baden	47.6	35.7	23.8	21.42
Bonndorf	42.8	28.5	19.04	14.28
Breisach	35.7	23.8	23.8	19.04
Bretten	41.59	31	28.5	21.42
Bruchsaal	35.7	28.5	23.5	16.66
Buchen	35.7	26.18	19.04	11.9
Bühl	40.4	28.5	23.8	19.04
Donaueschingen	42.8	28.5	19.04	14.28
Durlach—				
Town of Durlach	47.6	28.5	23.8	19.04
Land district of Durlach	40.4	28.5	23.8	19.04
Eberbach	40.4	23.8	23.8	19.04
Emmendingen	40.4	31	23.8	21.42
Engen	42.8	26.18	23.8	19.04
Eppingen	35.7	28.5	19.04	14.28
Ettenheim	38	28.5	19.04	14.28
Ettlingen—				
Town of Ettlingen	42.8	28.5	23.8	19.04
Land district of Ettlingen	38	28.5	23.8	19.04
Freiburg—				
Town of Freiburg	54.7	31	31	21.42
Land district of Freiburg	42.8	28.5	26.18	21.42
Heidelberg—				
Town of Heidelberg	47.6	33.3	28.5	23.8
Altenbach, Altendorf, Brombach, Heddesbach, Heiligkreuzsteinach, Lampenheim, Schönau, and Wilhelmsfeld	38	23.8	20.13	17.85
Bummenthal, Dilsberg, Gaiberg, Ganangelloch, Kleingemünd, Mauer, Meskesheim, Mönchzell, Mückenloch, and Pforzheim	47.6	35.7	31	23.8
Land district of Heidelberg	41.6	31	26.98	21.42
Säckingen	41.8	23.8	19.04	14.28
St. Blasien	42.8	23.8	19.04	14.28
Schönau	47.6	29.6	23.8	19.04

Table showing the daily wages of agricultural laborers in Germany—Continued.

District.	Adults.		Children.	
	Male.	Female.	Male.	Female.
GRAMD DUCHY OF BADEN—continued.				
Amts districts—Continued.	*Cents.*	*Cents.*	*Cents.*	*Cents.*
Schofheim	47.6	33.3	29.6	23.8
Schwetzingen	42.8	33.3	23.8	21.42
Sinsheim	38	28.5	23.8	19.04
Staufen	47.6	28.5	23.8	23.8
Stockach	38	23.8	19.04	14.28
Tauberbischofsheim	38	31	28.5	23.8
Triberg—				
Triberg, Hemberg, Niederwassor, and Schonach	47.6	28.5	19.04	16.66
Furtwangen, Gütenbach, Neukirch, and Schönwald	42.8	28.5	19.04	16.66
Gremmelsbach, Reichenbach, Rohrhardsberg, and Thannenbronn	38	23.8	19.04	16.66
GRAND DUCHY OF HESSE.				
Province of Starkenburg.				
Districts:				
Bensheim—				
Municipalities of Alsbach, Auerbach, Balkhausen, Bensheim, Biblis, Bickenbach, Bobstadt, Bürstadt, Fehlheim, Gross Hausen, Gross Rohrheim, Hähnlein, Hochstädten, Hofheim, Ingenheim, Klein Hausen, Lampertheim with Hüttenfeld, Langwaden, Lorsch, Oberbeerbach, Schmalbeerbach, Stettbach, Nordheim, Rodau, Schwanheim, Seeheim, Wattenheim, and Zwingenberg	38	28.5	23.5	19.04
Other part	33.3	23.8	21.42	19.04
Darmstadt—				
Towns:				
Darmstadt	47.6	28.5	21.42	17.85
Children under 14 years	.....	.....	17.85	17.85
Eberstadt	42.8	26.18	19.04	17.85
Children under 14 years	.....	.....	7.14	7.14
Pfungstadt	42.8	26.18	19.04	14.28
Children under 14 years	.....	.....	7.14	7.14
Municipalities:				
Arnheilgen	42.8	26.18	26.18	19.04
Children under 14 years	.....	.....	14.28	14.28
Erzhausen (children under 14 years)	.....	.....	7.14	7.14
Other parts	33.3	23.8	19.04	14.28
Offenbach—				
Town of Offenbach	47.6	28.5	23.8	19.04
Municipalities—				
Bieber	42.8	21.42	19.04	11.9
Bürgel	40.4	23.8	16.66	14.28
Dietesheim	42.8	28.5	14.28	11.9
Dietzenbach	28.5	19.04	11.9	11.9
Hain-zur-Dreieich, with Philippseich	40.4	23.8	23.8	19.04
Dudenhofen	35.7	23.8	23.8	19.04
Egelsbach, with Beyerseich	40.4	23.8	23.8	16.66
Froschhausen	35.7	23.8	23.8	16.66
Götzenhain	35.7	23.8	23.8	16.66
Gross Steinheim	35.7	23.8	23.8	16.66
Hainhausen	35.7	31	26.18	23.8
Hainstadt	40.4	23.8	23.8	16.6
Hausen	40.4	28.5	11.9	11.9
Heusenstamm	47.6	28.5	23.8	19.04
Jugenheim	35.7	28.5	23.8	19.04
Klein Anheim	35.7	23.8	23.8	16.66

Table showing the daily wages of agricultural laborers in Germany—Continued.

District.	Adults.		Children.	
	Male.	Female.	Male.	Female.
GRAND DUCHY OF HESSE—continued.				
Province of Starkenburg—Continued.				
Districts—Continued.				
Offenbach—Continued.				
Municipalities—Continued.	*Cents.*	*Cents.*	*Cents.*	*Cents.*
Klein Krotzenburg	35.7	23.8	23.8	17.85
Klein Welzheim	28.5	21.42	21.42	11.9
Lämmerspiel	35.7	35.7	23.8	19.04
Langen	47.6	23.8	11.9	11.9
Mainflingen	28.5	21.42	11.9	11.9
Mühlheim	35.7	23.8	14.28	11.9
Neu-Isenburg	47.6	23.8	11.9	11.9
Oberthausen	40.4	23.8	11.9	11.9
Offenthal	38	26.18	26.18	19.04
Rembrücken	47.6	35.7	23.8	21.42
Rumpenheim	40.4	28.5	35.7	28.5
Seligenstadt	35.7	28.5	35.7	28.5
Sprendlingen	35.7	19.04	19.04	14.28
Steinbach	35.7	23.8	23.8	11.9
Weisskirchen	40.4	28.5	28.5	23.8
Zollhamen	38	38	26.18	26.18
Province of Ober-Hessen.				
Districts:				
Alsfeld—				
Municipalities:				
Alsfeld	35.7	28.5	16.66	11.9
Altenburg	35.7	28.5	23.8	19.04
Angenrod	31	21.42	19.04	9.42
Appenrod	28.5	19.04	16.66	11.9
Arnsheim	31	21.42	19.04	11.9
Atzenhain	33.3	21.42	23.8	14.28
Bernsburg	31	19.04	16.66	9.42
Bernsfeld	28.5	19.04	19.04	11.9
Bieben	35.7	23.8	23.8	19.04
Billertshausen	28.5	21.42	19.04	9.42
Bleidenrad	28.5	23.8	23.8	14.28
Brauerschwend	33.3	19.04	16.66	9.42
Büssfeld	28.5	19.04	19.04	9.42
Gemünden	31	19.04	19.04	9.42
Dannenrod	28.5	19.04	16.66	11.9
Deckenbach	35.7	23.8	19.04	14.28
Ehringshausen	35.7	23.8	23.8	16.66
Elfa	28.5	19.04	19.04	11.9
Elbenrod	35.7	23.8	16.66	11.9
Elpenrod	35.7	23.8	16.66	11.9
Erbenhausen	31	23.8	16.66	11.9
Ermenrod	31	21.42	19.04	11.9
Eudorf	35.7	23.8	16.66	14.28
Eulersdorf	28.5	19.04	16.66	11.9
Fischbach	33.3	23.8	16.66	14.28
Flensingen	33.3	21.42	19.04	14.28
Gleimenhain	35.7	23.8	23.8	14.28
Gontershausen	35.7	23.8	19.04	14.28
Grebenau	28.5	19.04	19.04	14.28
Grosse Fulda	35.7	23.8	23.8	19.04
Haarhausen	31	21.42	19.04	14.28
Hainbach	35.7	21.42	23.8	14.28

Table showing the daily wages of agricultural laborers in Germany—Continued.

District.	Adults.		Children.	
	Male.	Female.	Male.	Female.
GRAND DUCHY OF HESSE—continued.				
Province of Ober-Hessen—Continued.				
Districts—Continued.				
Alsfeld—Continued.				
Municipalities—Continued.	*Cents.*	*Cents.*	*Cents.*	*Cents.*
Heidelbach	31	19.04	19.04	11.9
Heimertshausen	28.5	19.04	19.04	11.9
Hergersdorf	35.7	23.8	23.8	11.9
Höingen	35.7	23.8	19.04	14.28
Hamberg	35.7	21.42	19.04	11.9
Hopfgarten	35.7	23.8	23.8	19.04
Ilsdorf	28.5	19.04	16.66	9.42
Kestrich	35.7	23.8	23.8	19.04
Kirschgarten	28.5	19.04	19.04	14.28
Kirtorf	28.5	19.04	19.04	11.9
Lehnheim	28.5	19.04	19.04	11.9
Lehrbach	28.5	19.04	19.04	11.9
Leusel	31	21.42	19.04	9.42
Liederbach	33.3	19.04	16.66	11.9
Maulbach	35.7	23.8	19.04	14.28
Merlau	28.5	23.8	16.66	14.28
Münch-Leusel	28.5	23.8	16.66	14.28
Nieder-Breidenbach	31	23.8	19.04	14.28
Ober-Ohmen	31	21.42	19.04	14.28
Otterbach	28.5	21.42	19.04	14.28
Rainrod	35.7	23.8	19.04	11.9
Ruppertenrod	35.7	23.8	19.04	14.28
Schwabenrod	35.7	23.8	19.04	14.28
Schwarz	31	19.04	21.42	11.9
Storndorf	33.3	23.04	23.8	16.66
Udenhausen	31	19.06	21.42	9.42
Wahlen	28.5	21.42	19.04	11.9
Wallersdorf	35.7	19.04	19.04	14.28
Windhausen	28.5	21.42	21.42	11.9
Zeilbach	35.7	23.8	19.04	14.28
Zell	28.5	21.42	21.42	16.66
Amts district of Büdingen	35.7	23.8	19.04	16.66
Town of Fredebergs	47.6	28.5	23.8	16.66
Rüddinghausen, Saasen, Bollnbach, Veitsberg, Wirberg, Stangenrod, Stockhausen, Weikartshain, and Weitershain	34.49	21.42	19.04	14.28
Other parts	35.7	22.5	19.04	16.66
Lauterbach	35.7	23.5	17.85	17.85
Schotten—				
Municipality of Schotten	35.7	29.69	23.8	19.04
Other part	33.3	23.8	23.8	16.66
Province of Rhein-Hessen.				
Amts districts:				
Alzey	38	23.8	23.8	16.66
Bingen—				
Municipalities of Bingen, Büdesheim, Dietersheim, Frei-Weinheim, Gaulsheim, Gensingen, Kempten, Nieder-Ingelheim, and Ober-Ingelheim	40.4	23.8	23.8	16.66
Other part	35.7	23.8	23.8	16.66
Mentz—				
Town of Mentz	52.3	28.5	26.18	19.04

Table showing the daily wages of agricultural laborers in Germany—Continued.

District.	Adults.		Children.	
	Male.	Female.	Male.	Female.
GRAND DUCHY OF HESSE—continued.				
Province of Rhein-Hessen—Continued.				
Amts districts—Continued.				
Mentz—Continued.				
Municipalities:	*Cents.*	*Cents.*	*Cents.*	*Cents.*
Bretzenheim, Budenheim, Drais, Finthen, Gansenheim, Hechtsheim, Kastel, Kostheim, Mombach, Weisenau, and Laubenheim	47.6	23.8	23.8	19.04
Ebersheim, Essenheim, Ganbischofsheim, Harxheim, Klein Winternheim, Marienbron, Nieder-Olm, Ober-Olm, Sörgenloch, Stadecken, and Zornheim	38	23.8	21.42	19.04
Worms:				
Town of Worms	47.6	23.8	23.8	16.66
Municipalities of Herrnsheim, Hochheim, Ibersheim, Leiselheim, Neuhausen, Pfeddersheim, Pfiffligheim, Rhein-Dürkheim, Weinsheim, and Wiesoppenheim	40.4	23.8	23.8	16.66
Other parts	35.7	23.8	23.8	16.66
GRAND DUCHY OF MECKLENBURG-SCHWERIN.				
Domanium.				
Amts districts:				
Boitzenburg	33.3	19.04	16.66	16.66
Buckow	31	19.04	19.04	19.04
Bützow	38	23.8	11.9	11.9
Crivitz	35.7	23.8	11.9	11.9
Dargun	35.7	23.8	19.04	19.04
Doberan	40.4	23.8	23.8	23.8
Dömitz	35.7	28.5	23.8	23.8
Gadebusch	35.7	28.5	23.8	19.04
Grabow	35.7	26.18	19.04	19.04
Grevismühlen	35.7	21.42	19.04	19.04
Gülstrow	47.6	31	23.8	23.8
Hagenow	33.3	21.42	19.04	19.04
Lübtheen	35.7	21.42	19.04	19.04
Lübz	33.3	23.8	19.04	16.66
Neustadt	33.3	23.8	19.04	16.66
Ribnitz	47.6	33.3	26.18	26.18
Schwaan	47.6	19.04	19.04	19.04
Schwerin	40.4	23.8	14.28	14.28
Town of Wittenburg	35.7	21.42	19.04	16.66
GRAND DUCHY OF SAXE-WEIMAR.				
Districts:				
Weimar—				
Towns:				
Weimar and Ilmenau	42.4	23.8	19.04	14.28
Blankenheim	38	23.8	19.04	14.28
Other part	35.7	23.8	19.04	14.28
Apolda	35.7	23.8	21.42	19.04
Eisenach	33.3	21.42	19.04	16.66
Dermbach	31	21.42	19.04	16.66
Neustadt-an-der-Orla	35.7	23.8	19.04	14.28
GRAND DUCHY OF MECKLENBURG-STRELITZ.				
Duchy of Strelitz.				
Cabinet court	42.8	19.04	9.42	9.42
Domanium:				
Court of Feldberg	40.4	21.42	14.28	14.28
Village of Feldberg	40.4	21.42	14.28	14.28

Table showing the daily wages of agricultural laborers in Germany—Continued.

District.	Adults.		Children.	
	Male.	Female.	Male.	Female.
GRAND DUCHY OF MECKLENBURG-STRELITZ—continued.				
Duchy of Strelitz—Continued.				
Domanium—Continued.	*Cents.*	*Cents.*	*Cents.*	*Cents.*
Court of Mirow	35.7	23.8	14.28	11.9
Village of Mirow	29.7	19.04	14.28	11.9
Court of Stargard	47.6	23.8	19.04	19.04
Court of Strelitz	40.4	16.66	11.9	11.9
District of Fürstenberg	35.7	23.8	23.8	23.8
Knighthood farms	40.4	28.5	23.8	19.04
Towns:				
Nue-Strelitz	38	23.8	19.04	19.04
Neu-Brandenburg	38	26.18	19.04	14.28
Friedland	35.7	28.5	19.04	14.28
Woldegk	35.7	19.04	19.04	18.9
Strelitz	35.7	19.04	19.04	16.66
Fürstenberg	35.7	34.8	23.8	23.8
Wesenberg	28.5	19.04	14.28	14.28
Stargard	35.7	26.18	16.66	14.28
Principality of Ratzeburg.				
Domanium	40.4	28.5	23.8	21.42
Town of Schönberg	40.4	28.5	19.04	16.66
Alodial farms:				
Dodow	35.7	23.8	19.04	16.66
Torisdorf	40.4	26.18	19.04	14.28
GRAND DUCHY OF OLDENBURG.				
Duchy of Oldenburg.				
Towns:				
Oldenburg	47.6	35.7	21.42	21.42
Varel	47.6	35.7	21.42	21.42
Tever	41.6	29.7	23.8	17.85
Courts:				
Oldenburg	41.6	29.7	23.8	19.04
Westerstede	35.7	28.5	23.8	21.42
Varel	38	23.8	23.8	23.8
Tever—				
Municipalities:				
Heppens, Neuende, Bünde, Aumm, and Sandel	52.3	35.7	28.5	23.8
Cleocin and Sandel	41.6	26.18	23.5	17.85
Other part	47.6	28.5	23.5	21.42
Butzadingen	47.6	33.3	23.5	19.04
Brake	47.6	33.3	23.5	19.04
Elsfleth	47.6	33.3	23.5	19.04
Delmenhorst	47.6	29.7	23.5	19.04
Other part	35.7	23.8	23.5	19.04
Amts districts:				
Wildeshausen	35.7	23.8	23.5	19.04
Vechta	35.7	28.5	23.5	19.04
Kloppenburg	35.7	28.5	23.5	19.04
Friesoythe	31	19.04	19.04	14.28
Principality of Birkenfeld.				
Burgomasteries:				
Birkenfeld	35.7	23.8	23.8	19.04
Niederbrombach	33.3	23.8	23.8	19.04
Oberstein (except the town of Oberstein)	35.7	23.8	23.8	19.04
Herrstein	35.7	23.8	23.8	19.04
Nohfelden	33.3	23.8	23.8	19.04

Table showing the daily wages of agricultural laborers in Germany—Continued.

District.	Adults.		Children.	
	Male.	Female.	Male.	Female.
GRAND DUCHY OF OLDENBURG—continued.				
Principality of Birkenfeld—Continued.	*Cents.*	*Cents.*	*Cents.*	*Cents.*
Whole district	38	26.18	19.04	16.66
GRAND DUCHY OF BRUNSWICK.				
Town of Brunswick	47.6	35.7	23.8	23.8
Riddaghausen, Dibbesdorf, Flechtorf, Gliesmarode, Lehndorf, Lehre, Mascherode, Oelper, Querum, Rautheim, Rühme, Rüningen, Schandeloh, Schapen, Klein Stöckheim, and Veltenhof	47.6	29.7	29.7	19.04
Districts:				
Bortfeld, Broitzem, Oelsburg, Neu-Oelsburg, Vechelde, Vechelade, Frelistedt, Lelm, and Sunstedt	47.6	23.8	23.8	19.04
Municipalities:				
Warburg and Wolsdorf	47.6	21.42	23.8	19.04
Süpplingen	47.6	21.42	21.42	16.66
Boimstorf	47.6	19.04	19.04	16.66
Scheppan	47.6	19.04	21.42	16.66
Königslutter	47.6	23.8	23.8	16.66
Neuhaus	29.7	16.66	16.66	14.28
Vorsfelde	35.7	23.8	14.28	14.28
Reislingen	35.7	16.6	16.66	14.28
Bahrdorf	35.7	23.8	19.04	19.04
Vorsfeld	35.7	23.8	23.8	17.85
Colvörde	35.7	23.8	17.85	11.9
Towns of Holzminden and Stadtoldendorf	35.7	21.42	16.66	14.28
Other parts	35.7	21.42	16.66	14.28
Gandersheim	35.7	23.8	17.85	11.9
Blankenburg	35.7	19.04	19.04	14.28
DUCHY OF SAXE-MEININGEN.				
Townships:				
Meiningen	31	21.42	16.66	14.28
Hildburghausen	31	23.8	19.04	16.66
Sonneberg	38	26.18	23.8	19.04
Saalfeld	45.2	28.5	21.42	19.04
DUCHY OF SAXE-ALTENBURG.				
East district.				
Towns:				
Altenburg	42.4	23.8	21.42	17.85
Gössnitz	42.8	28.5	23.8	19.04
Luka	40.12	23.5	15.71	15.71
Meuselwitz	42.8	26.18	23.8	19.04
Ronneburg	35.7	28.5	23.8	19.04
Schmölln	42.8	28.5	23.8	19.04
Amts districts:				
Altkirchen	35.7	23.8	11.9	11.9
Braunichswalde	33.3	19.04	14.28	14.28
Breitenheim—				
Breitenheim	35.7	17.75	16.66	16.66
Brünaurod and Prössdorf	35.7	19.04	17.85	17.85
Mumsdorf	33.3	19.04	17.85	17.85
Schnauderhainichen	38	19.04	17.85	17.85
Teuriz	42.8	23.8	19.04	19.04
Ehrenhain	35.7	17.85	17.85	11.9
Gieba	42.8	28.5	28.5	28.5
Grossenstein	35.7	23.8	14.28	14.28
Gross Stöbnitz	35.7	23.8	14.28	11.9

Table showing the daily wages of agricultural laborers in Germany—Continued.

District.	Adults.		Children.	
	Male.	Female.	Male.	Female.
DUCHY OF SAXE-ALTENBURG—continued.				
East district—Continued.				
Amts districts—Continued.	*Cents.*	*Cents.*	*Cents.*	*Cents.*
Gross Steehan	35.7	23.8	19.04	19.04
Lumpzeg	28.5	19.04	14.28	14.28
Gessen (except Friedrichshaide)	35.7	23.8	14.28	14.28
Oberkossa	35.7	23.8	11.9	11.9
Lutschütz	35.7	21.42	19.04	14.28
Schwanditz	41.7	22.84	19.04	11.9
Dölzig, Tegkwitz, Dobraschütz, and Breesen	40.4	20.23	14.28	14.28
Lossen	39.27	19.04	14.28	14.28
Romschütz	38	21.42	16.66	16.66
Dobitschen	35.7	19.04	14.28	14.28
Mehna	35.7	20.23	13.09	13.09
Mencha	38	19.04	11.9	11.9
Göllnitz	41.7	23.8	19.04	19.04
Rollka, Pontewitz, Prehna, and Zschöppentz	38	21.42	11.9	11.9
Kertschütz, Rodamenschel, and Zweitchen	42.8	23.8	14.28	14.28
Kreutzen and Misselwsy	41.7	16.66	16.66	16.66
Godern	35.7	21.42	19.04	19.04
Starkenberg	41.7	19.04	14.28	14.28
Kraasa	35.7	19.04	14.28	14.28
Treben	33.3	21.42	19.04	19.04
Weissbach	40.4	21.42	11.9	11.9
Windischleuba	35.7	19.04	19.04	14.28
Wintersdorf	38	28.5	23.8	19.04
Frohnsdorf	35.7	21.42	14.28	14.28
West district.				
Town of Eisenberg	40.4	23.8	23.8	19.04
Other part	35.7	23.8	23.8	19.04
Children from 12 to 14 years	.....	.....	4.76	4.76
DUCHY OF SAXE-COBURG-GOTHA.				
Towns:				
Coburg and Gotha	33.3	21.42	21.42	16.66
Neustadt, Rodach, Königsburg, Ohrdruf, and Waltershausen	28.5	19.04	19.04	14.28
Other part of Coberg	23.8	16.66	16.66	11.9
Other part of Gotha	28.5	19.04	19.04	14.28
DUCHY OF ANHALT.				
Towns of Dessau, Cöthen, Zerbst, Bernburg, Rosslau, Leopoldshall, Hecklingen, and Gänsefurt	42.8	28.5	28.5	19.04
Other part	35.7	23.8	23.5	16.66
PRINCIPALITY OF SCHWARZBURG-SONDERSHAUSEN.				
Districts:				
Arnstadt—				
Arnstadt	38	21.42	16.66	16.66
Other part	35.7	23.8	16.66	16.66
Gehren	35.7	23.8	16.66	16.66
Sonderhausen	35.7	21.42	16.66	14.28
PRINCIPALITY OF SCHWARZBURG-RUDOLSTADT.				
District of Rudolstadt:				
Town of Rudolstadt	47.6	35.7	28.5	23.8
Municipalities of Cumbach, Eichfeld, Kirchhasel, Pflanzwirbach, Schaala, Schwarza, Teichröda, Volkstedt, and Unterwirbach	42.8	26.18	23.8	19.04
Other parts	35.7	23.8	23.8	16.66

Table showing the daily wages of agricultural laborers in Germany—Continued.

District.	Adults.		Children.	
	Male.	Female.	Male.	Female.
PRINCIPALITY OF SCHWARZBURG-RUDOLSTADT—continued.				
Ilm:	*Cents.*	*Cents.*	*Cents.*	*Cents.*
Town of Ilm	42.8	26.18	23.8	19.04
Other part	35.7	23.8	17.85	14.28
Leutenberg:				
Towns of Leutenberg, Arnsbach, Eichicht, Hockeroda, Hamma, Könitz, Reschwitz, and Underlognitz	42.8	26.18	23.8	19.04
Other part	38	23.8	23.8	16.66
Districts:				
Königsee	35.7	23.8	23.8	16.66
Frankenhausen—				
Frankenhausen	26.18	19.04	19.04	16.66
Schlotheim:				
Schlotheim	23.8	16.66	11.9	11.9
Mehrstedt	23.8	17.85	17.85	14.28
Straussberg	26.18	19.04	19.04	16.66
PRINCIPALITIES OF WALDECK AND PYRMONT.				
District of the principalities	35.7	23.8	19.04	14.28
PRINCIPALITY OF REUSS-GREITZ.				
Towns:				
Greitz	36.89	26.18	22.59	16.66
Zeulenroda	33.3	26.18	16.66	14.28
Farm districts of Bursk, Crispendorf, Dörflas, Friesau, Grochwitz, Mönehgrim, Möschtitz, Neundorf, Pahnstangen, Plothen, Rauschengesees, Remptendorf, Röppisch, and Zoppoten	28.5	16.66	11.9	9.42
Arnsgrün, Pöllwitz, Schönbrunn, Wolfshain, Leiningen, Büna, Dobia, Eubenberg, Gablau, Bernsgrün, and Fortstan	28.5	16.66	14.28	11.9
Fraurenth	35.7	26.18	19.04	14.28
Villages of Dosslitz, Nitschareuth, Tschirma, Neugernsdorf, Altgernsdorf, Wildetanbe, Kirchdorf, Lunzig, Hain, Hainsberg, Kauern, Mehla, Brückla, Hohendlsen, Neudörfel, Kleinreinsdorf, Sorge-Settendorf	35.7	21.42	14.28	11.9
Palace of Burgk and the forests in Burgk	28.5	17.85	11.9	9.42
Forests in the other parts of the country	35.7	21.42	16.66	11.9
PRINCIPALITY OF REUSS-SCHLEITZ.				
Gera	47.6	26.18	23.8	16.66
Altengesees	33.3	23.8	21.42	16.66
Blankenstein	31	23.8	21.42	21.42
Dürrenbach	33.3	23.8	16.66	16.66
Ebersdorf	33.3	23.8	21.42	16.66
Eliasbrunn	33.3	23.8	21.42	16.66
Gahma	34.4	23.8	14.28	14.28
Grumbach	33.3	23.8	33.3	21.42
Harra	31	23.8	21.42	16.66
Heinersdorf	33.3	28.5	21.42	16.66
Helmsgrün	33.3	21.42	21.42	16.66
Karolinenthal	33.3	23.8	21.42	16.66
Kiessling	26.18	16.66	19.04	14.28
Lichtenbrunn	33.3	23.8	21.42	16.66
Lothra	40.4	26.18	33.3	21.42
Lückenmühle	33.3	28.5	21.42	19.04
Neundorf	33.3	23.5	21.42	21.42
Oberlemnitz	23.8	17.85	13.9	10.6
Ossla	33.3	23.8	21.42	16.66
Pöritzsch	28.5	17.85	15.47	10.6
Ruppertsdorf	26.18	21.42	16.66	11.9

Table showing the daily wages of agricultural laborers in Germany—Continued.

District.	Adults.		Children.	
	Male.	Female.	Male.	Female.
PRINCIPALITY OF REUSS-SCHLEITZ—continued.	*Cents.*	*Cents.*	*Cents.*	*Cents.*
Saaldorf	33.3	19.42	19.04	14.28
Schlegel	39.19	23.8	21.42	14.28
Schönbrunn	31	23.8	17.85	16.66
Seibis	35.7	28.5	26.18	21.42
Thierbach	26.18	21.42	11.9	11.9
Thimmendorf	31	23.8	21.42	16.66
Titschendorf	38	26.18	21.42	16.66
Unterlemnitz	33.3	17.85	19.04	13
Weitisberga	33.3	23.8	21.42	16.66
Wurzbach	48.7	29.6	33.3	20.2
Blintendorf	28.5	19.04	26.18	14.28
Dobareuth	24.9	17.85	14.28	11.9
Frössen	22.5	15.4	16.66	13
Gebersretuh	33.3	21.42	14.28	14.28
Göritz	33.3	14.28	21.42	11.9
Göttengrün	28.5	19.04	14.28	11.9
Künsorf	28.5	19.04	21.42	14.28
Langgrün	28.5	19.04	19.04	14.28
Lerchenhügel	28.5	19.04	21.42	14.28
Mödlareuth	28.5	19.04	19.04	14.28
Pirk	28.5	19.04	21.42	14.28
Pottiga	28.5	23.8	17.85	14.28
Rothenacker	33.3	26.18	26.18	21.42
Seubtendorf	28.5	19.04	19.04	16.66
Spielmes	28.5	19.04	19.04	14.28
Stelzen	33.3	19.04	19.04	14.28
Ullersreuth	28.5	19.04	16.66	14.28
Venzka	28.5	19.04	10.5	10.3
PRINCIPALITY OF SCHAUMBURG-LIPPE.				
Towns:				
Bücksburg	35.7	28.5	23.8	17.85
Stadthagen	35.7	28.5	23.8	23.8
Townships:				
Bücksburg and Arensberg	33.3	23.8	17.85	14.28
Stadthagen and Hagenburg	33.3	23.8	20.2	17.85
PRINCIPALITY OF LIPPE.				
Towns:				
Detmold	33.3	23.8	23.8	21.42
Lemgo	41.4	29.7	26.18	21.42
Salzuflen	35.7	23.8	19.04	19.04
Blomberg	35.7	23.8	23.8	19.04
Horn	35.7	23.8	23.8	17.85
Barntrup	31	19.04	19.04	16.66
Lage	35.7	23.8	17.85	17.85
Brake—				
Courts:				
Brake	29.7	19.04	16.66	11.9
Hohenhausen	29.7	23.8	14.28	11.9
Varenholz	29.7	23.8	19.04	14.28
Sternberg and Barntrup	23.8	17.85	16.66	11.9
Blomberg—				
Amts districts:				
Blomberg	33.3	23.8	16.66	14.28
Schieder	33.3	19.04	16.66	11.9
Schwalenberg	26.18	19.04	19.04	14.28
Lipperode Cappel	35.7	23.8	14.28	14.28

Table showing the daily wages of agricultural laborers in Germany—Continued.

District.	Adults.		Children.	
	Male.	Female.	Male.	Female.
FREE HANSE TOWN OF LÜBECK.				
Towns:	*Cents.*	*Cents.*	*Cents.*	*Cents.*
Bremen	52.3	38	29.7	19.04
Travemünde	47.6	38	23.8	19.04
Land municipalities	35.7	19.04	19.04	11.9
FREE HANSE TOWN OF BREMEN.				
Land municipality of Bremen	47.6	28.5	28.5	28.5
Towns:				
Bremen	71.4	41.4	29.7	23.8
Brunerhaven	71.4	47.6	35.7	35.7
Vegesack	47.6	35.7	23.8	17.85
FREE HANSE TOWN OF HAMBURG.				
Towns:				
Hamburg	71.4	47.6	23.8	23.8
Borstel, Fuhlsdorf, Langenhorn, Alsterdorf, Ohlsdorf, and Klein Borstel	59	28.5	23.8	23.8
Farmsen, Volksdorf, Wohldorf, Ohlstedt, Gross Hausdorf, and Schmalenbeck	42.8	28.5	19.04	19.04
Marschlande	59.5	35.7	23.8	23.8
Bütxbüttel	42.8	28.5	23.8	23.8
Stada Bergedorf	59.5	35.7	23.8	23.8
Other part	42.8	28.5	19.04	19.04
ALSACE-LORRAINE.				
Lower Alsace.				
Township of Strassburg	52.3	28.5	23.8	15.47
Land district of Strassburg	47.6	38	26.18	21.42
Districts:				
Ersteln	42.8	33.3	26.18	21.42
Hagenau	42.8	33.3	26.18	21.42
Molsheim—				
Cantons:				
Molsheim and Wasselnheim	52.3	33.3	26.18	21.42
Rosheim and Schirmeek	42.8	31	26.18	21.42
Saales	33.3	26.18	16.66	11.9
Townships:				
Schlettstadt—				
Cantons:				
Weiler	42.8	28.5	28.5	19.04
Barr and Schlettstadt	47.6	33.3	33.3	23.8
Wissembourg	42.8	33.3	28.5	23.8
Zabern	42.8	34.5	23.5	19.04
Upper Alsace.				
Municipalities:				
Colmar, Gebweiler, Mülhausen, Münster, Rappoltsweiler, Rufach, and Sulz	52.3	42.4	28.5	23.8
Markirch	52.3	28.5	28.5	23.8
Altkirch, Ammerschweier, Andolsheim, Beblenheim, Dammerkirch, Dornach, Egisheim, Ensisheim, Grussenheim, Habsheim, Heiligkreuz, Harburg, Hüningen, Hunaweier, Iabsheim, Ingersheim, Isenheim, Kaiserberg, Kleuzheim, Lutterbach, Masmünster, Neudorf, Niederhergheim, Reichenweier, Rixheim, St. Amarin, St. Ludwig, Sennheim, Sierenz, Sigolsheim, Sulzmatt, Thann, Türkheim, Weier, and Wintzenheim	47.6	38	26.18	21.42
Other municipalities	42.8	35.7	23.8	19.04

Table showing the daily wages of agricultural laborers in Germany—Continued.

District.	Adults.		Children.	
	Male.	Female.	Male.	Female.
ALSACE-LORRAINE—continued.				
Lorraine.	*Cents.*	*Cents.*	*Cents.*	*Cents.*
Township of Metz	59.8	42.8	23.8	19.04
Land district of Metz	47.6	35.7	28.5	23.8
Distficts:				
Bolchen	42.8	28.5	23.5	19.04
Salins	47.6	28.5	23.5	19.04
Diedenhofen	47.6	35.7	28.5	23.8
Forbach	42.8	35.7	28.5	23.8
Saarburg	42.8	28.5	23.8	19.04
Saargemünd—				
Town of Saargemünd	47.6	28.5	23.8	19.04
Other part	42.8	26.18	23.8	19.04

W. H. EDWARDS,
Consul-General.

UNITED STATES CONSULATE-GENERAL,
Berlin, March 7, 1891.

SHEEP AND WOOL IN CHINA.

REPORT BY CONSUL-GENERAL LEONARD, OF SHANGHAI.

A report on the subject of sheep and wool products of China must necessarily be somewhat vague, owing to the absence of means of obtaining reliable information; but the following brief report, made in conformity with the Department's circular of instruction dated the 19th of September last, is respectfully submitted, in hopes that it will be of some value.

(1) Wool is obtained from the northern provinces of Shan-See, Shen-See, Chi-li, and Leao-Tong, the eastern provinces of Shan-Toong and Kiang-Soo, the western province of Se-Chuen, and the central provinces of Ho-Nan, Hoo-Pe, and Ngan-Hoe. Very little wool is known to come to Shanghai from the other provinces—Yun-Nan, Koei-Choo, Hoo-Nan, Kiang-See, Che-Kiang, Fo-Kien, and Qwang-Tong. The bulk of what is commercially known as China wool comes from Mongolia.

(2) Sheep are usually kept in flocks of from 500 to 2,000.

(3) Generally the wool is gathered by shearing; but in ball wool, which comes from Chi-li, the wool is combed with wide combs from the backs of the sheep and afterwards twisted up into balls. Rope wool is so called because it is made up in coils in the interior for transportation to seaboard. A bale weighs about 150 pounds avoirdupois.

(4) Wool is principally used in China in the manufacture of a coarse felt used for making shoes and hats.

The inhabitants of the northern provinces use sheepskins for clothing to a large extent.

(5) Northern wools are known commercially as ball, loose, rope, and lambs' wool. Wool from the province of Kiang-Soo is known as Woosie, which is the name of a district. Se-Chuen, Ho-Nan, and Hoo-Pe wools are designated by the name of the province from which they come. These names are the local commercial designations.

Until within a few years, the exportation of wool from China was trifling. The following table shows the amount exported, in piculs of 133⅓ pounds avoirdupois each, from Shanghai during the years 1880 to 1890:

Year.	Quantity.	Year.	Quantity.
	Piculs.		*Piculs.*
1880	5,923.43	1886	26,065.81
1881	7,277.51	1887	38,570.14
1882	8,699.17	1888	49,950.19
1883	13,742.54	1889	73,906.49
1884	19,889.63	1890	80,143.91
1885	24,344.88		

Together with this report I send specimens of the following wools: Ball, lambs', rope, loose, Woosie, Ho-nan, Se-Chuen, Hoo-Pe. The other inclosures are: A piece of coarse felt, such as usually comes around bales of furs, etc., shipped to Shanghai from the north; a small piece of felt, such as is used for shoe soles; a felt cap, best quality; a trade circular, dated January 16, 1891.*

J. A. LEONARD,
Consul-General.

UNITED STATES CONSULATE-GENERAL,
Shanghai, February 1, 1891.

THE WATERWORKS OF BERLIN.

REPORT BY CONSUL-GENERAL EDWARDS.

The works on the upper Spree, which were erected by a private company, but which came into the possession of the city in 1873, used river water, which was cleansed by filtering before entering the pipes. It was, however, intended that the works erected on the Tegel Sea should use subterranean water, obtained from deep wells, with which the reservoirs and pipes could be supplied without filtering. But experiments made soon after these works were put into operation showed that the hope to obtain from the wells clean water fit for drinking and household purposes had been ill founded. Nevertheless, it was hard to decide that the system based on the Tegel works must be abandoned and a return made to open water courses and filtration. Accordingly, on January 26, 1882, the city council decided to build filters at Tegel and to use sea (lake) water instead of well water. When, in 1883, the extension of the Tegel works by the erection of seven vaulted filters was discussed, it was decided to experiment in regard to the

*Samples sent to the Department of Agriculture.

quality of a mixture of well and filtered lake water. These experiments were confided to Professor Dr. Finkener, and, upon his finding the result unsatisfactory, the erection of the filters was agreed to. Thus the question as to whether river or well water should be used was decided in favor of the former, and it was shown that future extension of the waterworks must be in the basin of the River Spree, and not of the Havel.

As it seemed possible that here suitable well water of good quality might be obtained, it was decided to appoint a commission which, with the assistance of geognostic, chemical, and hydrognostic specialists, should make borings and establish experimental stations on the Müggel and Long seas (lakes), above Cöpenick. The city council on November 29, 1883, appropriated the sum of 40,000 marks for the carrying out of these experiments. These experiments were extended at four stations from February, 1884, to the end of January, 1885. Each station was in uninterrupted operation for 3 months. The result was that the hope of obtaining good water in an easier manner than by filtration had to be abandoned. The commission reported in this sense, and the city council decided on March 8, 1886, to make no further attempt to obtain good well water.

For 7 years (1878 to 1886) the problem of the practicability of obtaining good well water was discussed, and various experiments were made; but finally it has been admitted as a fact that the country in the vicinity of Berlin is incapable of supplying a city of 1,500,000 inhabitants with clean water satisfactory in quantity and quality. As, therefore, the rivers Havel and Spree, even if their navigation be doubled, can spare sufficient water for this purpose, and as the imperial sanitary bureau in 1882 decided that, from a chemical standpoint, sand filtration gives the water of the Spree a satisfactory quality, the use of filtered water for the city of Berlin has been decided upon.

After the city council had rendered the decision of January 26, 1882, above mentioned, in regard to the first half of the Tegel works, which had been put into operation in the year 1877, the building of twelve vaulted filtering basins was at once commenced, and the same were put into operation in November, 1883. The total sand surface of these filters was 21,931 square metres, and the Tegel works were enabled to place at the disposal of the city of Berlin 43,200 cubic metres of water every 24 hours.

That this first half of the Tegel works, in connection with the old works at the Stralau gate, would not long be able to supply the needs of a constantly increasing population was reported to the city officials by the water commission in the year 1879; but the then undecided question in regard to the use of well or lake water delayed the completion of these works until the fall of 1886.

The fear of the water commission was not unfounded, for, in the middle of the summer of 1883, in the upper stories of houses there was such an inadequate supply of water that the magistracy was obliged to discontinue the use of water for public fountains and for the sprinkling of streets, squares, and gardens until the beginning of cooler weather. The weather, however,

changed, and the use of water did not have to be limited. In the following year, however, on the 24th of July, the magistracy was obliged to issue an order requiring the most economical use of water for public purposes, and this order could not be raised until September 27.

The completed Tegel works were put into operation in March, 1888. They placed at the disposal of the city daily 86,400 cubic metres of water cleansed through sand filters.

If the city required—as from its rapid growth might soon be expected—an increased supply of water, it was seen that it would have to be sought from another source; in other words, that new waterworks would have to be erected, for the old works at the Stralau gate had long reached the limit of their capacity. Furthermore, the increase of factories above Berlin and the ever-increasing ship and steamer traffic on the upper Spree constantly increased the impurity of the water and the costs of filtration. Moreover, the population of the metropolis stood in danger of receiving water dangerous to health in the event of interruption of business or a defect in the works; consequently, it was decided to build new works on the Müggel Sea. These works and filtering establishments it was decided to locate on Müggel Sea, above the town of Friedrichshagen, and to send the purified water thence to the plateau north of Lichtenberg. Permission to take not more than 2 cubic metres of water per second from Müggel Sea was granted by the minister of public works on July 28, 1888. It was determined to give these works a daily capacity of delivering 172,800 cubic metres of water to the city of Berlin, though only half of the works were to be erected at once. The estimated cost was 20,000,000 marks. These Müggel and Tegel Sea works together will be able to supply to Berlin daily 259,200 cubic metres of water, which, at the present rate of use, will be sufficient for a population of 2,500,000.

In addition to the extension of the Tegel works during the period under report, force works were erected on the Tempelhof hill, near the brewery, and were put into operation in June, 1888. This had been rendered necessary by the growth of that part of the city on the high Kreuzberg, south of Bergmann street and right and left of Belle-Alliance street, whose houses, without such force works as those in Belfort street, could not have a sufficient supply of water in their upper stories, except through a very expensive increase of pressure in the water pipe.

Some time earlier the great increase of population in the high northern part of the city had rendered necessary a strengthening of machine force there. This had been foreseen, and the difficulty was removed by the erection of a new (the fourth) steam-engine.

Thus, up to the present date, the municipal waterworks have been able to supply the quantity of water required by the population of the city; and the new works, which, it is hoped, will be completed before the close of 1892, will remove all cause for anxiety in this respect for a long series of years.

For the good of the people, however, not only the quantity, but the quality, of the water must be considered. Since the impurities of the pipes by the water from the Tegel deep wells have been remedied, all cause for

doubt in regard to the effect on health by the use of water supplied by the waterworks has been removed.

The quality is constantly watched by impartial officials, at present by the imperial sanitary department. Dr. Gustav Wolffshügel, in a report to the same covering the period from July, 1884, to April, 1885, said:

Upon examination of water samples, in no case was Berlin pipe water found to have any injurious effect upon health, either from its chemical ingredients or from the microparasitic particles which it contained.

Professor Dr. Koch said in his report from June 1, 1885, to April 1, 1886:

The bacteriologic inspection has been made, as heretofore, very carefully in the imperial sanitary department. The results are shown in the following table. A glance at the table shows that during the period of examination water from the Stralau, as well as the Tegel works, was entirely of satisfactory character.

The business results of the municipal waterworks in the period from April 1, 1882, to March 31, 1889, are shown in the inclosed table. It shows that during this period the population of the city lots supplied with water increased from 981,158 to 1,360,285, or about 38.64 per cent., and that the use of water grew from 22,596,522 cubic metres to 31,620,750 cubic metres, or about 39.98 per cent.

The annual use of water per head of population ranged from 63.57 litres to 71.55 litres, the average for the 7 years being 65.38 litres. In comparison with other large towns, this average is very low; but other circumstances must be borne in mind. First, in Berlin water is sold by measure, so that it is in the interest of the person who pays for the water (the landlord) to discover and check waste. Furthermore, the situation of the city—in the valley of the Spree, with the street level only 2 or 3 metres above the water level of the soaked sand diluvium—is such that water for factory and industrial purposes can be easily obtained at small cost on every lot in the lower zone of the pipe system of the municipal waterworks. This water can be raised at less cost per cubic metre to the small height necessary for ordinary factory and industrial purposes than would have to be paid to the municipal waterworks for a like quantity of water.

There are therefore a considerable number of small waterworks where the water is obtained from wells on private lots. Such water is used for feeding steam-boilers and for steam condensation. Of such private waterworks within the limits of the pipe system there were at the end of March, 1889, 606, and their number is constantly increasing. These, it is estimated, supply 66,807 cubic metres of water daily. The municipal waterworks supplied in the fiscal year ended March 31, 1889, on an average, 86,632 cubic metres daily. So that the average amount used daily was 153,439 cubic metres, of which 57 per cent. and 43 per cent., respectively, were supplied by municipal and by private waterworks. Hence the average used per head of population was, in 1888–'89, not 64.45 litres, but 113.07 litres.

The table, moreover, shows the total net receipts and outlays and the surpluses. In regard to the latter, it must be borne in mind that of the total

quantity of water delivered generally in the city the percentage used for public purposes—for watering public parks and gardens, for public fountains and closets, for cleansing the canalization system, for sprinkling streets and suppressing fires—is delivered free of cost. It also shows the assets and liabilities of the municipal waterworks, as well as the financial condition of the same, at the close of each year from April 1, 1882, to March 31, 1889. This table also shows the total assessed value of the waterworks and the total loan debt. On March 31, 1889, the former was 39,320,265.51 marks and the latter 36,264,471.35 marks.

Table giving the statistics of the Berlin municipal waterworks.

Year ended March 31—	House connections.			Population.			
	Number.	Increase.		Average to each house connection.	Total for area supplied.	Increase.	
		Number.	Per cent.			Number.	Per cent.
1883	17,034	458	2.76	60.61	981,158	26,380	2.76
1884	17,654	620	3.63	60.61	1,065,705	84,547	8.61
1885	18,216	562	3.18	60.61	1,098,920	33,215	3.12
1886	18,659	443	2.43	60.61	1,126,012	27,092	2.47
1887	19,193	534	2.86	60.61	1,156,802	30,790	2.73
1888	19,755	582	3.03	66.93	1,316,312	159,510	13.79
1889	20,403	628	3.17	66.93	1,360,285	43,973	3.34

Year ended March 31—	Water consumption.					
	Total quantity during year.	Increase.		Average quantity per day.	Maximum used per day.	Quantity used daily per head of population.
		Quantity.	Per cent.			
	Cub. met.	*Cub. met.*		*Cub. met.*	*Cub. met.*	*Litres.*
1883	22,596,522	698,614	3.19	61,908	82,010	63.95
1884	24,453,100	1,856,578	8.21	66,812	99,384	63.57
1885	25,935,936	1,482,836	6.06	71,057	95,493	65.38
1886	26,175,912	239,976	0.93	71,715	100,302	64.07
1887	29,967,790	3,791,878	14.48	82,103	111,616	71.55
1888	30,877,360	909,570	3.04	84,364	119,215	64.68
1889	31,620,750	743,390	2.4	86,632	124,907	64.45

Year ended March 31—	Total receipts.	Total expenses.	Surplus.	Cost of producing 100 cubic metres of water.	Price received per 100 cubic metres of water.	Percentage of total amount supplied used free for public purposes.
	Marks.	*Marks.*	*Marks.*	*Marks.*	*Marks.*	
1883	4,277,062	3,136,677	1,140,385	13,881	18,928	7.58
1884	4,460,803	3,364,309	1,096,494	13,758	18,242	8.16
1885	4,654,236	3,757,427	896,809	14,487	17,945	7.46
1886	4,791,957	3,153,098	1,638,859	12,046	18,307	7.2
1887	5,192,501	3,210,090	1,982,411	10,712	17,327	9.3
1888	5,436,448	3,349,554	2,086,894	10,847	17,607	9.11
1889	5,501,493	3,424,375	2,077,118	10,029	17,398	9.37

Table giving the statistics of the Berlin municipal waterworks—Continued.

Year ended March 31—	Surplus.			
	Used for amortization of loans.	Used to cover reduction of value of works by use (wear and tear).	Total.	From loans up to date, used for improvements and extentions.
	Marks.	*Marks.*	*Marks.*	*Marks.*
1883	574,860	872,571.43	1,447,431.43	16,305,022.32
1884	601,515	1,096,493.56	1,698,008.56	16,305,022.32
1885	628,467	896,809.57	1,525,276.57	16,311,022.32
1886	656,733	500,000.00	1,156,733.00	16,311,022.32
1887	688,444	*100,000.00	2,430,714.47	17,311,022.32
1888	718,488	*100,000.00	2,428,087.37	17,585,322.32
1889	750,021	*100,000.00	2,286,816.42	†18,408,914.67

Year ended March 31—	Total book value of waterworks at close of year.	Amount of debt from loans at end of year.	Amount turned over to other municipal departments or to the city treasury.
	Marks.	*Marks.*	*Marks.*
1883	38,206,103.00	38,204,247.00	‡267,814.00
1884	37,608,853.00	37,608,732.00	‡200,000.00
1885	39,983,906.00	36,980,265.00	‡525,893.00
1886	36,595,294.47	36,323,532.00	‡625,000.00 §245,478.00
1887	17,845,171.44	36,635,088.00	§1,642,270.47
1888	38,744,481.51	36,190,900.00	§1,609,599.37
1889	39,320,265.51	36,264,471.35	§2,436,795.42

* For creation of reserve fund.

† For building expenses have been paid: From loans, 18,408,914.67 marks; from surpluses, 6,178,503.26 marks; total, 24,587,417.93 marks.

‡ Paid over to municipal drainage department.

§ Paid over to city treasury.

W. H. EDWARDS,
Consul-General.

UNITED STATES CONSULATE-GENERAL,
Berlin, March 12, 1891.

CROP INSURANCE COMPANIES OF RUSSIA.

REPORT BY CONSUL-GENERAL CRAWFORD, OF ST. PETERSBURG.

It is officially reported that the commission organized at the ministry of domains for the elaboration of a basis of insuring the crops against hail has accomplished its work. Up to the present the insurance of crops against hail has been slow in developing itself. According to the latest official data, this branch of insurance amounted only to $9,000,000 throughout Russia in Europe, whereas the average crops of the Empire have a value about four hundred times larger than that insured. It must also be remarked that up to now there only exists one insurance society which undertakes this kind of insurance, and certain particularities of its statutes only admit large pro-

prietors to insurance. It has therefore been deemed necessary that the smaller proprietors and peasantry should form a mutual insurance company against damages caused to the crops by hail.

Many projects presented at the zemstro assemblies of the provinces of Orel, Smolensk, Voronezh, Tamboff, Simberia, and Koorsk have been rejected. This result is attributed to the fear that, notwithstanding the expensive annual premiums which the participants would have to pay, the operations of the enterprise would not be sufficiently guarantied if only applied to one province, as this province might be simultaneously smitten with hail throughout its entire territory; hence the idea conceived by certain provinces to unite themselves, so as to organize a system, of insurance which would cover the whole region. This plan has also been rejected, together with one proposed by the governor of Penza, which was an obligatory insurance of the crops against hail throughout the Empire.

This latter project had been judged impracticable by the ministry of domains, for the reason that some of the different localities are more tried by other atmospheric causes than by hail, and that it would be unjust to oblige the proprietors of these regions to insure their crops against an evil which does not touch them, or at least not seriously.

The special committee attached to the ministry of domains having this question under consideration has completed its preliminary investigation; but, before presenting their project to the council of the Empire, it will be brought to the discussion of the zemstros of different provinces and agricultural and insurance societies, to be modified in conformity with the remarks made by these institutions.

In conclusion, I may say that it appears to be a settled fact that the insurance will be, in all cases, governmental, with the participation of the zemstros, and that it will also be obligatory throughout the Empire, thus introducing a new and very important factor into the agricultural interests of the Russian Empire.

J. M. CRAWFORD,
Consul-General.

UNITED STATES CONSULATE-GENERAL,
St. Petersburg, March 24, 1891.

Wages in Roumania.—Minister Snowden, under date, Athens, March 21, 1891, transmits the following statement of the wages paid per diem in Roumania: Joiners, 96.5 cents; carpenters, stonecutters, and masons, $1.15\frac{8}{10}$; tinsmiths, 57.9 cents; gypsy man, 39.6 cents; gypsy woman, 29 cents; porters, 39.6 cents; street-sweepers, 39.6 cents; miners, 96.5 cents; policemen, 39.6 cents; servants in official offices, $1.15\frac{8}{10}$; agricultural day laborers, 39.6 cents.

NORTH SEA AND BALTIC CANAL.

REPORT BY CONSUL JOHNSON, OF HAMBURG.

Since the sixteenth century sixteen plans for the connection of the North Sea with the Baltic have become known, nine of which belong to the period from 1863 to 1881. The two last projects of Leutze and Dahlström served as a basis or guide for the project now being executed. In 1886 two laws were passed whereby the building of this canal became a certainty, and on June 3, 1887, in the presence of the late Emperor William I, the first spadeful of earth inaugurating this great work was turned at Holtenau, near Kiel.

The canal consists of a cut 98.6 kilometres in length, beginning at Holtenau, on the Bay of Kiel, and terminating near Brunsbüttel, on the River Elbe, thus running clear through the province of Schleswig-Holstein from northeast to southwest. As the mean water level of the North Sea is considerably higher than that of the Baltic, both openings will be provided with huge locks. Near Rendsburg there will be a third lock, connecting the new canal with the old Eider Canal.

Of the four railroads which cross the canal, three will be conducted over it by turn bridges of 36 metres clear width of trajection; one, the West Holstein Railroad, by means of a suspension bridge (near Grünthal) of 156.5 metres' span. The latter, at the same time serving as a high road, is to have a height of 42 metres, thus permitting the largest vessels to pass under it without lowering topmasts. The turn bridges are all constructed with one track only, in such a manner as to give a separate bridge to the double-track railroads for each of their tracks. This makes it possible, in case of one of the turning benches getting out of order, to conduct the traffic in both directions for a time over the remaining bridge. For the conducting over the canal of two much-frequented country roads the erection of turn bridges of equal width of trajection is contemplated. For all remaining roads of any importance ferries are to be provided, the total number of which will amount to sixteen, situated at a distance of about 6 kilometres from one another. There will be altogether six turnouts, to enable vessels to pass each other. They will be 450 metres long and 60 meters wide at the canal bottom.

The medium water level of the canal will be about equal to the medium level of the Kiel harbor. Considerable variations occur—on an average, on about 25 days in the year only—so that the locks at the outlet on the Baltic will nearly always be open. For 60 kilometres from the mouth at Holtenau to the city of Rendsburg the bottom is horizontal; from here to the mouth, near Brunsbüttel, a slight declination sets in, amounting at the beginning for 20 kilometres to 1 in 200,000; 15 kilometres further, to 1 in 50,000; 12 kilometres further, to 1 in 33,333; and, finally, at the mouth for 12 kilometres, to 1 in 25,000.

At the lowest tide the profile of the canal has, in a depth of 6.17 metres below the surface of the water, a navigable width of 36 metres, so as to allow

the largest Baltic steamers, which, with a few exceptions, do not exceed a draft of over 5 metres and a width of 12 metres, to pass each other. For the conducting or drawing of the lines the movement and motion of men-of-war and of the largest vessels of the merchant marine have been determinative, because these can only pass curves having a large radius; therefore, 1,000 metres have been fixed upon as the smallest radius. Considerable expansions of the profile take place up to a radius of 2,500 metres. Between two counter curves a straight line has been interpolated for the safety of the navigation of the vessels, for which a speed of 5.3 knots is admissible. Turn bridges are only built over straight lines of the canal, to facilitate observation. Sixty-two kilometres, or about 63 per cent. of the entire canal, consist of straight lines; 5 kilometres with a radius of 6,000 metres, 5½ kilometres with a radius of 5,000 metres, 13 kilometers with a radius of 3,000 metres, 4 kilometres with a radius of 2,500 metres, 1 kilometre with a radius of 2,000 metres, 2 kilometres with a radius of 1,700 metres, 3 kilometres with a radius of 1,500 metres, and 3 kilometres with a radius of 1,000 metres.

The line from Holtenau to Rendsburg runs through a very undulating country and has the greatest number of curves. The smallest curves of 1,000-metre radius are situated behind the emptying of the canal into the Firth of Kiel.

In front of the outlet into the River Elbe there is a roadstead 8 kilometres in length and 1.5 kilometres wide, thus having a surface of 12 square kilometres. Its average depth is 11 meters at lowest tide. The cutting through of 15 kilometres of the watershed of the rivers Elbe and Eider requires an excavation of 30 metres, greatest depth to the bottom of the canal.

On the line from Rendsburg to the Baltic a ridge of hills 24 kilometres long and 14 to 32 metres above the canal bottom must be cut through. Just beyond Rendsburg the canal line passes through the upper Eider lakes, which will have to be lowered 2.33 metres.

The flow of the canal is towards the Elbe. At high tide in the Elbe it discharges into the Baltic. At the Elbe mouth the permissible speed of flow is up to 2.8 knots; towards Rendsburg it is less. In every tide 3,000,000 to 4,000,000 cubic metres, partly afflux from interior sources and the remainder from the Baltic, are moved. At the Elbe mouth the locks remain open down to 0.5 metre below the general low tide of the Elbe; on the Baltic, 0.5 metre above or below the mean water level of the Baltic.

At the lowest tide the transverse section of the canal is equal to six times the immersed transverse section of the largest merchant vessels of 60 to 62 square metres transverse surface. For the navy there are required 22 metres width of canal bottom, at least 58 metres width of water surface, and 8½ metres depth of water. The possible deepening of 9 metres has been foreseen. The greatest depth for merchant vessels is calculated at 6.5 metres. In the height of the keel of such merchant vessels drawing 6.5 metres the transverse section of the canal must be of sufficient width to permit vessels of 12 metres width to pass each other. On the banks there must remain a

height of 2 metres at mean water level for the passing wave. In the height of the movement of the waves the banks are provided with stone packing. The canal bed is 22 metres wide, generally; in curves under 2,500 metres radius the width is increased. Where the radius is 1,000 metres, the increase amounts to 16 metres. The slopes have an inclination of 1 to 3, up to 3 metres above the bed; 1 to 7, up to 7 metres above the bed. Here the slope is broken by a level 2½ to 9½ metres wide. From 7 metres above the bed the inclination of the slope is 1 to 1½, and is provided with stone packing up to 1 metre above the mean water level. The transverse section, with 8.5 metres depth of water, is equal to 380 square metres contents.

Altogether 78,000,000 cubic metres of earth have to be moved, to accomplish which the following is required: Twenty-seven dry dredgers, 24 floating dredgers, 97 locomotives, 100 kilometres of track, 2,700 dirt cars, 4 elevators, 15 steamboats, 51 receptacles for dredging utensils, 37 steam pumps, a number of forging establishments, and 2 brickyards; total value, 14,000,000 marks. Up to the beginning of April, 1890, 11,000,000 cubic metres had been moved, or 1,000,000 cubic metres per month. If the work is continued at this rate, there is reason to believe that the canal will be finished by April 1, 1895. Its total cost is fixed at 156,000,000 marks, or about $37,128,000. Of this amount the Russian Government paid 50,000,000 marks before work was begun. The remaining 106,000,000 marks are paid, as they are required, by the German Empire. Like all large undertakings of this kind, however, the cost will most likely reach a higher figure.

About 7,000 workmen are employed in the construction, all of whom are provided with board and lodging by the imperial canal commission, under whose guidance and management the canal is being constructed. There are 38 camps for 100 to 500 men each; each camp has its own executive office, sleeping barracks, and outhouses. The sleeping barracks contain heatable cells with 8 bunks each and an air space of 12 cubic metres. In the executive office building there is a store for the sale of provisions and woolen wearing apparel, tobacco, etc.; a kitchen and storeroom, a meeting hall of 180 square metres, a washhouse and disinfectory, and an appartment for a district surgeon. The common laborers receive about 70 cents a day, while the foremen and skilled laborers get from 95 cents to $1.15 per day. They are said to be well satisfied with their quarters and their food.

The regulations for the working of the North Sea-Baltic Canal have been adapted to the traffic to be anticipated. The traffic between the Baltic and the North Sea, including vessels coming from a greater distance, embraced, on an average, from 1871 to 1880, through the sound, 35,246 vessels; through the belts, 4,000 vessels; through the Eider Canal, 2,258 vessels; total, 41,504 vessels. The traffic in the sound was, withal, on the increase up to the year 1882. It amounted to 24,541 vessels in 1858 and 38,788 vessels in 1882. The average tonnage was 200 registered tons for sailing vessels and 620 registered tons for steamships. The average tonnage compared as follows: Sailing vessels to steamships as 1 to 3.1. On an average, 12,241,830 regis-

tered tons were moved between the North Sea and Baltic, half of this freight being carried by sailing vessels, the other half by steamships. Of these craft there frequented, on the average, the German Baltic ports 9,577 vessels with 2,464,544 registered tons; Danish Baltic ports, 5,177 vessels with 1,133,895 registered tons; Swedish Baltic ports, 13,718 vessels with 4,031,821 registered tons; Russian Baltic ports, 12,084 vessels with 4,611,570 registered tons; so that Russia showed the most extensive foreign traffic, with Sweden next and Germany third. From this traffic such cargoes as can be forwarded more advantageously around the Skaugh must be deducted, and then there would remain some 9,000,000 registered tons which would come into question for the North Sea-Baltic Canal.

Considering the proportion of the tonnage of sailing vessels to steamers (1 to 3.1), and the fact that in the years 1878 to 1880 the number of steamers compared with that of the sailing vessels as 28,814 to 79,887, and that about 20 per cent. of the former and 25 per cent. of the latter sail in ballast, the annual traffic coming into question is calculated as follows:

Description.	Vessels.	Cargo.
Steamers:	*Number.*	*Reg. tons.*
In ballast	1,568	972,408
Loaded	6,274	3,888,632
Total	7,842	4,861,040
Sailing vessels:		
In ballast	5,436	1,087,050
Loaded	16,305	3,261,150
Total	21,741	4,348,200

Of this traffic, considering all the circumstances (some of the vessels are still going to take the route around the Skaugh, on the other hand the traffic increases every year), four-fifths of the traffic may be counted upon for the canal for the near future. This traffic will be unequally distributed among the different months and days, and likewise unequally concerning the direction in which the canal is passed. With sailing vessels this will depend upon the wind. All of these considerations lead to the result that 27 steamers and 30 tows of 3 to 4 sailing vessels each, moving in one direction, must be regarded as the highest limit for one day; that the technical arrangements must suffice for this; but that in the future the number of steamships will increase and that of sailing vessels decrease.

The profit derived from ships using the canal, instead of the route around the Skaugh, is thus calculated for each minute of actual time: For steamships of 620 registered tons, 0.626 mark; for sailing vessels of 200 registered tons, 0.058 mark; so that, with regard to a passage through the canal, the value of time to steamers compares to that of sailing vessels as 10.8 to 1. The time saved by a steamship sailing from Kiel to Hamburg via the canal, instead of through the Skaugh, is estimated at 2½ days. The time of passage through the canal, including stoppages and delays, will be about 13

hours. By the aid of electric light traffic may be carried on at night similar to the manner in which it is at present conducted in the Suez Canal.

The fees for the use of this new water way have not yet been fixed upon and will probably not be until after its completion. In times of peace the canal is to be open to men-of-war, as well as merchant vessels of every nation, while in case of a war its sole use would be reserved for the vessels of the German navy.

From the year 1858 to 1885 not less than 6,316 steamships and sailing vessels were wrecked on the Danish and Swedish coasts, and of these 91 steamships and 2,742 sailing vessels were lost. During the years 1877 to 1881 708 persons lost their lives in parts which, after the completion of the North Sea-Baltic Canal, need no longer be navigated. The loss to German shipping alone amounted to 6,150,000 marks.

Germany has two naval ports: one at Kiel, on the Baltic, and the other at Wilhelmshafen, on the North Sea, which, after the canal is finished, will be within easy access of each other. Now it would take a squadron about 3 days to sail from Kiel to Wilhelmshafen. Thus the North Sea-Baltic Canal, aside from its being a wonderful feat of engineering and the fact of its employing some 7,000 men for over 7 years, will prove to be strategically and commercially one of the events of the century and a safeguard against enormous losses of life and property.

CHAS. F. JOHNSON,
Consul.

UNITED STATES CONSULATE,
Hamburg, March 28, 1891.

AFFAIRS IN GIBRALTAR.

REPORT BY CONSUL SPRAGUE.

TRADE WITH THE UNITED STATES.

The situation regarding the trade in general between this market and the United States continues much the same as at last report. A fair business is still carried on in the importation of refined petroleum and flour direct from New York, while the tobacco trade still continues greatly paralyzed under the vexatious restrictions, as already stated in previous reports; nevertheless, the importations of Kentucky and other American descriptions of tobacco have not altogether ceased, nor are they likely to so long as the weed is regarded as a monopoly in Spain.

GROWING CROPS OF CEREALS.

On account of the backward condition of the growing crops in Spain, Algeria, and Morocco, all kinds of cereals have been steadily advancing in price in all the neighboring markets, with reduced stocks of barley and wheat on hand. It is feared that the coming crops may finally turn out much under those of previous years, both as to quantity and quality.

BRITISH NAVY.

The British channel fleet, composed of some of England's best ships of war, has been visiting this port and been stationed here for several weeks past. It took its departure on the 21st ultimo on its homeward voyage, calling into Cadiz Bay on its way.

I understand that the naval hospital it had established years ago at the Portuguese capital has recently been abandoned, and a wing of the military hospital here, which had hitherto been under the control of the army authorities, has recently been set apart for the exclusive accomodation of the navy.

PROPOSED DRY DOCK.

I do not learn of any decided action having yet been taken with regard to the proposed construction of a dry dock in Gibraltar. As the newly appointed governor to this fortress, General Sir Lothian Nicholson, is an engineer officer and has lately held the high post of inspector of fortifications, it is possible he may be instructed to study the project, and, after obtaining his views and opinions upon this proposed formidable work, the home authorities may then be in a better position to decide as to the advisability of carrying out or not the proposed scheme; in the meantime it seems to be a settled question to extend considerably the present dockyard mole for the better accommodation and safety of the British vessels of war constantly arriving at this port.

The new fortifications on the summit of the rock are said to be on the point of completion, but I am not aware of the arrival of any additional supply of new rifled guns required to be mounted thereon, although I am informed that a quantity of the most improved armament is shortly expected. A large supply of the old style is still kept in use in the fortress as a reserve.

HORATIO J. SPRAGUE,
Consul.

UNITED STATES CONSULATE,
Gibraltar, April 3, 1891.

ORIENTAL TRADE OF AUSTRIA.

REPORT BY CONSUL HAWES, OF REICHENBERG.

The foreign trade of Austria-Hungary has increased considerably during the last 10 years, as the trade balances show conclusively. The exports, which amounted in 1881 to 731,000,000 florins, in 1882 to 782,000,000 florins, and in 1883 to 750,000,000 florins, fell in 1884 to 691,000,000 florins and in 1885 to 672,000,000 florins. From this time, however, it has continually increased. In 1888 it reached 729,000,000 florins; in 1889, 747,000,000 florins; and in the first 9 months of 1890, 582,000,000 florins. The balance in favor of Austria, which in 1889 amounted to 169,000,000 florins, showed for the first 9 months of the last year 120,000,000 florins and for the whole year will probably have reached 200,000,000 florins.

The data now available for 1890 show enormous figures, even when we take into consideration the great increase of sugar exports and the extraordinary export to the United States preceding the passage of the new tariff.

The Monarchy has, in the last decennary, lost a very considerable trade in the countries of the Balkan peninsula and in the Orient, as well as in the Levant, partly through its own fault and partly owing to circumstances beyond its control. It is a characteristic fact that in Roumania, in spite of Government aid in the form of freedom from taxes and free importation of machinery and raw stuffs, most of the factories founded do not succeed, because all the economic factors of this country favor agriculture and discourage small industries.

In connection with the sad consequences which the closing of the Austrian market to the products of the earth and herds of Roumania caused, it appears like the irony of fate that goods formerly ordered from Austria are now procured from other manufacturing countries at quite as dear prices, Austrian manufactures, even, being purchased in Germany. In this connection it appears that, upon the expiration of the German-Roumanian treaty in 1891, there may be an end to the importation of Austrian wares through Germany. The present unnatural relations may consequently soon find an end. Even if the conclusion of a commercial treaty between Austria and Roumania may not be expected yet, the present commercial war will soon be over.

The Roumanian Government has finally adopted a new tariff, composed really of two tariffs, one a minimum tariff for those countries which are as liberal to Roumanian provinces as to those of other countries and a maximum tariff for countries which do not stand on so favorable a footing.

Should Austria fall under the minimum tariff, which increases the value of the wares from 8 to 10 per cent., exportation will be facilitated very much, and would probably soon reach its old figures.

An arrangement with Turkey relative to trade with the Orient is of great importance to Austria also. The treaty of 1862 with Turkey expired on July 5, 1890. It will, however, according to its stipulations, remain in force until a new treaty is negotiated. In the meantime a treaty has been concluded with Egypt, which will remain in force for 10 years from January 1, 1891, with 1 year's notice, based upon mutual concessions. Austria has obtained the following advantages: The duty on beer, glassware, porcelain, paper, clothing, underclothing, and shoes is 10 per cent. Austria also partakes of the advantages of the English-Egyptian convention. These arrangements cause in Austrian industrial and trade circles universal satisfaction, as it is now thought that Austrian trade with Egypt may be improved. Austrian exports to Egypt amounted in 1889 to 17,100,000 francs, against 19,600,000 francs the previous year, of which loss the textile industry bore the principal burden.

Although the convention referred to above took effect January 1, 1891, no change has yet taken place, as the many treaty rights possessed by other powers in Egypt have as yet prevented it.

Bulgaria will also play an important rôle in the trade negotiations between Austria and Turkey. Austria has been assured that the English-Bulgarian arrangement will be extended to Austrian provinces. In the meantime, since the exchange of notes in October, 1890, goods from Austria pay the general duty of 8.5 per cent., and the old table of values for many Austrian articles was abolished.

The Austrian treaty negotiations with the Porte are still rather obscure, but from the German-Turkish treaty it is seen that Turkey has done away entirely with her ad valorem tariff and substituted therefor a rather detailed specific tariff.

In regard to relations with Servia, it is known that the Servian Government, at the instance of the Austrian cabinet, has expressed its opinion that the old ad valorem tariff should be replaced by a specific tariff and a more rigid supervision of border traffic. There will also be an opportunity in these treaty negotiations to favor Austrian exports, especially as Servia had an opportunity during the celebrated "hog war" to convince herself of the advantage of good trade relations.

The Oriental Railway, which binds the Monarchy with the Balkan peninsula as far as Constantinople, has not produced such favorable results as was hoped, the principal reason being the difficulties which the Balkan states present to the conclusions of the *conférence à quatre* regarding direct traffic. The lack of direct transportation and cheaper freight between western Europe and Turkey, *i. e.*, the Balkan states, is the cause of great difficulty to the Austrian merchant. With the exception of beer, which enjoys the advantage of direct transportation, freight must still be carried by sea; therefore, the recently prepared arrangement of a direct tariff and the universal regulation of freights between Austria-Hungary, Servia, Bulgaria, and Turkey is of great value. Although the Government has paved the way by judicious treaties, it remains for corporations and firms to take the proper advantage of the circumstances.

The exports to Roumania have fallen from 154,000,000 francs in 1883 to about one-third of that sum, and in other parts of the Orient Austria has felt the competition of other countries. Still, Austria possesses an important share of exports to these parts. The sugar trade is almost entirely in the hands of Austria, and in textiles Austria still plays an important part. In the maintenance of its position as sugar exporter, the improvement of the textile trade, and the protection of exports of beer, paper, glass and porcelain ware, fancy goods, iron and ironware, spirits, matches, lumber, and drugs lies the present chief duty of Austria in this connection. Trade with some Oriental countries has of late increased; for instance, exports to Bulgaria were 4,300,000 francs more in 1889 than in the previous year.

Experience has shown that in the Orient great collections of samples, floating exhibitions, etc., are of no value, and trade can only be built up by competent, trustworthy travelers who speak the languages and are familiar with the local relations, as well as the establishment of permanent local houses.

The preparation and distribution of new samples, the allowance of liberal sample discounts, tasteful putting up and solid packing, and the most accurate agreement of the shipment with the samples are factors all needed to build up trade.

JNO. B. HAWES,
Consul.

UNITED STATES CONSULATE,
Reichenberg, March 20, 1891.

MEXICAN NATIONAL RAILROAD.

REPORT BY CONSUL-GENERAL SUTTON, OF NUEVO LAREDO.

The Mexican National Railroad is the shortest and quickest route from the American frontier to the capital of Mexico. The fast train, called "the Aztec limited," leaves this city every day in the year and reaches the city of Mexico in 40 hours and 15 minutes. The train consists of a baggage-express-mail car, a through Pullman, a third-class and a combination second-first-class car. Besides this an extra Pullman sleeper runs to and from Monterey.

Leaving this city at 8 p. m., Monterey, distant 168 miles, is reached at 3 a. m. Here the Monterey sleeper is switched off and the rest of the train goes on up the mountain to Saltillo, 235 miles, where it arrives at 7 a. m. The passengers take breakfast at Saltillo; pass Venegas, 356 miles, at 12 o'clock; Catorce (the dinner station), 370 miles, at 1 p. m.; and reach San Luis Potosi (supper station), 478 miles, at 5.10 p. m. San Miguel, 586 miles, is reached at 10 p. m.; Acambaro, 663 miles, at 2:30 a. m.; Flor de Maria (breakfast), 757 miles, at 7:30 a. m.; Toluca, 795 miles, at 9:15 a. m.; and the city of Mexico, 840 miles, at 12:15 p. m. This gives a running time, including four stops for meals, of nearly 21 miles per hour.

The beautiful and historic city of Monterey, with its surrounding mountain ranges and the noted peaks of La Silla and La Mitre, the Topo Chico Hot Springs, and Bishop's Palace Hill, will well repay a stop off of a week or more. From Monterey to Saltillo the road winds and climbs its way to the higher level, and the scenery along the line is very fine. Burro paths from the silver mines high up on the mountain sides down to the dump heaps by the side of the track, peaks covered with clouds and again breaking out into the sunshine make the ride one of great interest. The traveler should always try to pass this portion by daylight, but to do this under the present schedule must stop off and take the mixed day train. The view going down from Saltillo to Monterey is the best, and especially standing on the front platform of the baggage car, with twenty-five or thirty freight cars in front. On this down grade the steam is used only to keep the pressure on the air brakes. At one point on this down trip a small mountain stream is crossed on a bridge 20 feet high. Soon the grade is at

a level of the stream, and the train passes the mouth of a ditch, into which water flows, and is carried many miles below to a small piece of level land. This ditch, which dates back to the time of the Spanish domination, follows the side of the mountain, and the railway goes alongside, now close by and then at greater distance; and, as the grade falls much the more rapidly, the ditch is soon high up on the mountain side, while the train runs on the lower level of the cañon.

Saltillo, the breakfast station, is next reached. The battle field of Buena Vista is some 7 miles beyond, and the track runs within 50 feet of the point of the foothills at whose base, along the narrow *camino real* bordered by the *barranca* and this point of the foot hills, was fought the main portion of that battle.

Some distance beyond is a fine view along the horseshoe curve. Toward noon the celebrated Mineral de Catorce, which has yielded so many million dollars of silver, is seen to the left, and high up on its upper crest, far out of sight, is the Real de Catorce, with a population of from 8,000 to 12,000 (according to the output of the mines), in which no wheeled vehicle is ever seen.

Along here is the great prairie-dog village, which a recent visitor from our Department of Agriculture estimated to contain 200,000 dogs on some 15,000 acres of land. The line goes right through the village.

From San Luis Potosi, the second commercial city of Mexico, in a fertile valley, with rich mining districts all around it, the traveler passes, at night, Dolores Hidalgo, where the Washington of Mexico lived and where in 1810 he started the revolution against Spanish domination.

The next morning at Toluca one gets the first glimpse of the snow-capped crater of the extinct Toluca volcano. From Toluca the ride up the mountain to the summit of the divide affords one of the finest views in the country. At first the line parallels the old King's Highway, then with two engines begins the steep ascent. As the train rises, the wide valley to the right, cultivated to the very foothills, looks like a chessboard, with the communal holdings cut into square pieces covered with growing crops. At one point a turn around the brow of the mountain brings the train to a stop, where, if the engines were derailed and fairly started to rolling, they would go 5,000 feet away and down into the very plaza of one of the old Aztec cities, Acoyocac. All of this, the further rise to 10,635 feet, the sharp descent into the wonderful valley of Mexico are magnificent and, to the student of Aztec and Mexican history, of deep interest.

Within the last 5 years a steadily increasing number of our citizens has made trips of business or pleasure to Mexico. It seems to me advisable that this should go on increasing. Our large financial investments in Mexico are greatly aided by this travel, and it enables our people to know Mexico and the Mexicans better.

To the sight-seer Mexico affords inexhaustible riches, while her mining, her agricultural, commercial, and financial developments are of interest to

the man of business. To the student of history and racial questions Mexico is perhaps the most valuable field in the whole world.

The number of our people visiting Mexico would have been greater, except for certain conditions which are now being fully surmounted. The well-to-do tourist has an almost pathetic regard for his or her stomach, and it was formerly difficult to provide suitable refreshments for this very necessary part of the human system. The traveler was started off at an early hour with nothing but poor coffee and bread to support nature and keep up an appreciative state of mind for the many curious things en route until 11 or 12 o'clock; then a hurried struggle in, perhaps, a box car with a breakfast which, from its cosmopolitan badness, left a bad taste in the mind long after its physiological badness has passed; a dinner at, say, 4 or 5 p. m. which was little, if any, better, and then headache and bad dreams. In a Pullman car, of course, there was a decent bed, but when the tourist left that behind the future was very uncertain.

In these high altitudes the cold is often very severe, and when, as some years ago, a good meal or a good bed or a well-warmed room were almost unattainable, few people availed themselves of the railways, and these in turn did not send an increased number in the following year. To be sure, something is still lacking along the best-traveled routes—there usually is anywhere—but matters are much better than formerly.

At Laredo, Tex., a "passengers' assistant" for the National Company meets every train. His sole duty is to help people across the river and start them happily on their way. He is in uniform, speaks English and Spanish perfectly, and is a general utility man. He sees lone ladies into the 'bus for supper, buys tickets, engages berths; gets United States coin changed into Mexican, or *vice versa*, at the railway office, and that, too, at the exact rate of exchange; sees to checking and examination of baggage at the customs on both sides, dispatches packages and telegrams, and answers all questions.

The company now has excellent eating houses, and good meals also, at Saltillo, Catorce, and San Luis Potosi, and stops can now be made at all principal, and at some minor, places with reasonable expectations of fair accommodations at hotels. This is particularly true as to Monterey, where is a large permanent, as well as tourist, population of our citizens. Every considerable place has street cars and telephones; Monterey, San Luis Potosi, and Mexico have electric lights, and many other improvements are being made which add materially to the tourists' comfort.

Life in Mexico in the extreme heat of summer is far from agreeable, unless one can seek some high altitude; but there can hardly be a more interesting or useful journey than a winter tour to Mexico. Our traveling countrymen ought certainly to know as much of their next-door neighbor as of European states. The average tourist here usually lays in a supply of walking canes, silver filigree work, ornaments made of Puebla onyx; wax and cloth figures of men, beasts, birds, etc.; feather pictures, and a heavy stock of *loza* (pottery) and baskets. The discovery of the existence

in this country of iridescent pottery some years since is due to Mr. Charles Dudley Warner, who had the subject investigated for Harpers' Monthly by Mrs. Addis.

There are now many good guide books to Mexico, and, not to be outdone, the National has issued a large amount of valuable literature of this sort for free distribution. The incoming and outgoing of the tourist is made miserable in advance by the dread of the customs officers. Constant travel has, however, smoothed the way in this regard, so that there is almost no trouble nowadays, and, with the aid of the passengers' assistant, or *ayudante de passajeros*, there is no cause for annoyance. The customs officers along the border are uniformly polite, and every possible courtesy is shown. This is especially true on the Mexican side, where even the former strict and often annoying and useless revisions are gradually being reduced to a minimum. By recent arrangments any baggage can be wire-sealed through to destination to principal cities in the interior of Mexico, but not beyond the capital.

As it is a matter of curiosity to travelers to know the altitudes along the line, I give the following:

Stations.	Distance from Nuevo Laredo.	Altitude.
	Miles.	*Feet.*
Nuevo Laredo		806
Monterey	167	1,700
Saltillo	237	5,000
Vanegas	356	5,500
Catorce	371	6,000
San Luis Potosi	479	6,000
Dolores Hidalgo	565	6,000
San Miguel	587	6,000
Ocloya	621	5,700
Acámbaro	664	6,290
Maravatio	702	6,700
Toluca	795	8,700
La Cima (the Height)	817	10,635
City of Mexico	840	7,300

CONNECTIONS.

At Laredo, Tex., the Mexican National connects with its auxiliary line, the Texas-Mexican, to Corpus Christi, Tex., on the Gulf of Mexico, 161 miles distant. This line connects at Alice, and also at Corpus Christi, with the San Antonio and Aransas Pass system. At Laredo, Tex., close connections are made each way with the International and Great Northern. At Monterey it crosses the line of the Monterey and Mexican Gulf Railway (standard gauge) and connects with trains over that line northwest to Venadito, on the International, and southeast with trains to Victoria and the end of the line, now building rapidly to Tampico. At Vanegas it connects with the narrow-gauge (3 feet) road to Cedras and the mines of the Catorce. At San Luis Potosi it connects with a branch of the Central, east to the Gulf of

Tampico and west to the Central's main line at Aguas Calientes. At Celaya, between San Miguel and Rueretero, it again crosses the main line of the Central, while at Acámbaro it connects with its Patzcuaro branch, southwest toward the Pacific, and at Tacuba, near the city of Mexico, with its El Salto branch, which runs some 40 miles to the north.

Passengers can leave St. Louis, Mo., by the St. Louis, Iron Mountain and Southern at 8:05 p. m., arriving at Laredo at 3:15 p. m., 42 hours later. A stop at Laredo from 3:15 to 8 p. m. affords ample time for transfer and examination of baggage, supper, etc., so that the whole time from St. Louis to the city of Mexico, including the stop at Laredo and stops for meals en route, is 87 hours.

It will be noted that the schedule time of nearly 21 miles per hour on the National compares very favorably with that of any other line in Mexico. Although this is a narrow (3 feet) gauge, the special Pullman cars, built within the last year or two, are models of comfort, and this, added to excellent eating houses and every other accommodation possible at the border and along the line, has built up a very good through passenger traffic. On some portions of the line near Vanegas the running time is about 30 miles per hour, a very good speed for a narrow-gauge train. This, however, is made possible by the fact that the roadbed is, generally speaking, in good condition and that the portion between Saltillo and San Luis Potosi is, perhaps, naturally the best in the country.

From Laredo to Saltillo a mixed train runs each way daily, stopping over, however, at Monterey until the next day. From San Miguel to the city of Mexico an extra passenger train runs daily each way, and from Toluca into Mexico a third passenger train runs daily. Two daily trains are run on the El Salto branch, one on the Corpus Christi branch and one on the Matamoros branch. The total length is as follows:

Railways.	Length.	
	Kilometres.	*Miles.*
Main line, from Rio Grande bridge, at Nuevo Laredo, to depot in city of Mexico	1,350.44	838.63
El Salto line	68.29	42.41
El Salto line (unused end)	4	2.48
Quarry branch from Naucalpan	4.45	2.76
Patzcuaro branch	154.35	95.85
Matamoros branch (Matamoros to San Miguel)	121.58	75.50
Branch to repair shops, Nuevo Laredo	1.53	0.95
Cintura Railway, cityof Mexico	5.10	3.17
Street railway, city of Mexico	3.54	2.20
Texas-Mexican Northern, in Laredo, Tex	2.16	1.34
Brownsville and Gulf, Brownsville, Tex	1.61	1
Texas-Mexican	260.91	162.03
Fort McIntosh branch	0.95	0.51
Total	1,978.91	1,228.91

I have said that the National was a 3-foot gauge. When the concession was obtained, in September, 1880, the Denver and Rio Grande, in the United States, had proven a temporary success as a narrow gauge, and the promoters,

Messrs. Palmer and Sullivan, thought this gauge would be most suitable for the line of country to be traversed. It was also thought almost impossible to build and operate a standard gauge, because of the many sharp curves and heavy grades in getting from the border to the table-lands and in going over the divide between Toluca and the city of Mexico. It now seems to be generally admitted that this gauge was a serious error. It is cheaper to build a narrow gauge at first, and it is possible to build and operate one in places where a standard gauge is impracticable; but after this main line was once completed to the capital and it began to be an active competitor for the through imports and exports, it was soon determined that it was at a disadvantage as compared with standard-gauge lines.

The National is the shortest and best route now built, or possible to be built, between a border on the United States tributary to St. Louis, Mo., and the principal cities in the interior of Mexico. If it were a standard gauge, it would be a much more active competitor than at present, although even now it is the chief freight route between the two countries. The company, at an expenditure of about $8,000,000, would be enabled to change the main line to a standard gauge, and could use the present 30 to 45 pound rails, shorter ties, and present rolling stock on the Pacific extension and on many needed branch lines, which would serve as traffic feeders. There are no engineering difficulties on any portion of the main line which would prevent the broadening of the gauge and its successful and economical operation. In doing this there would be some slight changes in the present location and in curvatures between the border and Maravatio, the third station beyond Acámbaro. From this point a new line some 30 miles in length would be constructed east to connect with the El Salto branch, and thence south on this to the city of Mexico. This would also reduce the distance into the capital some 15 to 25 miles and avoid the steep grades and sharp curves on the rise from Toluca over the summit and down to the valley of Mexico. The water in Mexico is very hard on locomotive boilers, and, whether they use coal or native woods, there is more proportionate waste of fuel, more wear and breakage, and more general loss in running a narrow, than a standard, gauge locomotive. The tendency on this road in recent years has been to increase the weight of the rails from 30 to 45 pounds and to greatly increase the weight of the locomotives. As it is not possible to distribute all of this increased weight below the line of equilibrium, this tends to render them top-heavy. The same is true as to the capacity of the freight cars, and, while the proportion of dead weight is perhaps lower than in standard-gauge cars, yet the net freight results are not in proportion to the added expense and cost of operation.

Like all other roads in Mexico, it has found it extremely difficult to much more than pay cost of operation. The fourth annual report of the president, Capt. W. G. Raoul, states the earnings of the road for the year ended December 31, 1890, in Mexican currency, at $3,754,966.36 and the cost of working the road at $2,927,961.89, leaving a net profit over cost of working of $827,004.47, in Mexican currency.

Net profit over cost of working, in United States currency at 80 cents		$661,603.58
Less the following repairs and replacements not properly chargeable to capital account:		
Increasing number of ties and ballasting old line	$69,305.14	
Replacement of rails, Texas division	22,435.81	
Replacement of locomotives	16.414.37	
		108,155.32
Total		553,448.26
Less:		
Collection and distribution of subsidy	$4,031.51	
Expenses, London agency	6,399.44	
Net loss in exchange	2,397.32	
		12,828.27
Net profit over all expenses, renewals, and replacements		540,619.99
Less the earnings against the Federal Government not yet collectable		36,434.05
Net result available for interest on bonds		504,185.94
Received from subsidy trustees, account of interest deficiency for year 1890		305,314.06
Total available cash		809,500.00
Against this was paid on prior-lien bonds to December 31		747,000.00
Accrued interest for December, 1890		62,500.00
Total		809,500.00

OPERATION.

Table showing the net earnings and expenses of the Mexican National Railroad, in Mexican currency, for 1889 and 1890.

Year.	Gross earnings.	Cost of working road.	Net profits over cost of working road.	Percentage of gross earnings for working road.
				Per cent.
1889	$3,660,124.24	$2,993,431.54	$666,692.70	81.78
1890	3,754,966.36	2,927,961.89	827,004.47	77.97
Increase	94,842.12		160,311.77	
Decrease		65,469.65		3.81

The saving has been mainly in the roadway and motive-power departments, largely due to the improved condition of the roadway and engines effected by previous expenditures. The train service was maintained through the rainy season better than ever before. There were two expensive and several minor accidents during the year. Eight new locomotives were purchased during the year, the payments for which are distributed over 5 years. Since 1887 one hundred and twenty-five freight cars have been condemned and destroyed, and some twenty-five more are now ready for this process.

There is an urgent necessity for taking immediate steps to increase the equipment. During the busiest months in the past year the road was earning all it could with its present rolling stock, and, as will be seen by the figures previously given, this limit of earnings must be exceeded before the fixed charges of the prior-lien bonds can be met therefrom.

The excess of tonnage over the previous year, measured by the unit of 1 ton per 1,000 kilogrammes transported 1 kilometre, is 21,574,616 tons, and the excess of the actual number of tons handled is 43,835 tons. In 1889 there was an abnormal traffic in railway-construction materials. The excess of this traffic in 1889 over 1890 was 26,798 gross tons, and of earnings $166,541.87.

In studying the future prospects of the company by considering the influence the road has had thus far upon the development of the country which it serves, it is necessary to take account of the fact that it was the growth of the regular business of the country that produced the gain of $94,842.12 over the last year, and that that increase was made besides making good the falling off of $166,541.87 in railway-construction material, which is equivalent to a growth of the regular business of the road of something over $250,000, or nearly 8 per cent., after eliminating the railway-construction material.

For the year 1888 the total gross earnings of the road, not including railway-construction material, were $2,040,447.65. This was for the first 10 months of the year, before the middle division of the main line was completed, and for the months of November and December, after the main line was finished. It will be seen that the total ordinary traffic was greater in 1889 than 1888 by $1,619,676.59. Of course, the first year of the completion of the main line brought a large business which had been waiting this event. The difference between 1889 and 1890 represents probably what may be fairly expected to be the annual increase, which ought to be from 8 to 10 per cent. on gross ordinary earnings. If the equipment is brought up to the needs of the traffic, I should presume that this increase could be doubled, bringing it up to from 16 to 20 per cent. In spite of prevailing financial conditions, there is a considerably increased demand for imported merchandise in Mexico and of exports of domestic products other than precious metals.

The Texas-Mexican division shows a net profit for 1890 of $9,950.74, as against a loss in 1889 of $18,821.14. The through traffic to the border comes mostly by way of the International to Laredo, and is there taken over by the Mexican National. As only a small portion is taken over by the National on the Texas-Mexican division from the San Antonio and Aransas Pass system at Alice Station, and as the country along the line has not yet fairly started upon its inevitable change from a grazing to an agricultural region, it has not been possible in late years to make this division profitable. The small net profit above mentioned could have been used to advantage in keeping the line in better repair.

As to this change from grazing to agricultural, the first cotton was grown along the line of the Texas-Mexican division in 1888, during which year 160 bales were produced; in 1889, 1,270 bales; and in 1890, 4,700 bales. There is some as fine cotton country in that section as I have ever seen—level, already cleared, easy to cultivate, and may be relied upon to produce from half a bale to more than 1 bale per acre. I presume that 10,000 bales will be produced in 1891, and, so soon as immigration sets in this direc-

tion strong enough to warrant the breaking up of large tracts now used for grazing, ten times as much may easily be raised in the country tributary. In fact, the whole of this southwest portion of Texas will raise good cotton without irrigation, and with only a partial failure once in 5 years from drought.

The Texas-Mexican division served the National years ago in an emergency, but has never since been a source of direct profit. It has, however, been indirectly profitable, since it gives them connection at the Gulf, and later at Alice and Corpus Christi, with the San Antonio and Aransas Pass system, thereby rendering them less dependent upon the International.

It would be a very profitable thing if the company would immediately raise sufficient funds to change the Texas-Mexican division from a narrow to a standard gauge and make the main line from Laredo to Monterey a double gauge by laying a third rail. This ought to be done immediately, and is of much more pressing importance than the change of the whole of the main line. Monterey and points northwest connecting with the International of Mexico and thereby with the Mexican Central at Torreon, and to the southeast to Linares, Victoria, and, within a few months, clear through to Tampico, already require a considerable freight tonnage, and the present limit will be rapidly increased during the year. By this means the National could control their fair share of all through northern Mexico traffic, and that, too, more profitably than if they were still obliged to transfer everything at the border. There are certain kinds of heavy freight—lumber, dynamite, heavy machinery, live animals, and merchandise brought in refrigerator cars—which must be transshipped here at a considerable additional expense. This would also enable the company to turn on to the main line and Mexican branches the present equipment of the Texas-Mexican division, and thus save the purchase of new. It would also render the freight capacity of the road more elastic than now.

Of course, there are certain serious disadvantages incident to a different gauge of freight cars. In times of heavy traffic, when their own cars are all occupied, they simply have to refuse to receive freight. If they were standard gauge as far as Monterey, this difficulty would be much reduced, as it is easier and cheaper to use cars of another line than to go without them and thus delay freight. The present financial condition of the company is such as to forbid the carrying of an extraordinary supply of equipment to be idle at times and only required in the busiest seasons. The city of Monterey is the most important in northern Mexico, and, if the expectations of those interested are realized, bids fair to merit the term already given to it of the "Birmingham of Mexico." This is the only method by which the National can hold and increase its present large and profitable freights between that city and the border. The present rails on the Texas-Mexican branch will serve fairly as a standard gauge until gradually replaced by heavier ones. Those taken out can always be used to advantage on the main line and branches.

If the works now in progress at Corpus Christi shall result in obtaining deep water, this line would receive a considerable additional traffic therefrom.

The main line had been doing a very profitable business in the transport of medium-grade silver ores up to the time when, in 1889, the ruling by the United States Treasury Department stopped their free importation into the United States for smelting. This ruling has already caused the company a loss of several hundred thousand dollars, and was more severely felt because three-fourths of the freight cars coming north are empty and, generally speaking, all cars go south loaded. These empties could have been filled and made to earn freight on their return from Monterey and that vicinity to the border, whereas they are now brought back at a loss. This ruling has resulted in the creation of large plants for smelting ores in Mexico, particularly at Monterey and San Luis Potosi. One at Monterey is already in operation, and another will soon begin; one even larger is under construction in San Luis Potosi, and there are others building in different portions of Mexico. The National will get a considerable traffic in the Catorce dry ores brought to Monterey for mixing and some in low grade carried from along its line into Monterey; but this will not begin to compensate for the loss in the longer haul to the border.

The problem of building and operating railways in a foreign country is a new one to our citizens, and is much more difficult than when done within our own territory. The mere financiering requires ability of a very high order, as well as favorable financial conditions, and the latter must hold through a series of years.

Mexico is a country of magnificent distances, so that the minimum amount required to place the capital in connection with the border assumed great proportions at the outset. The subvention of $10,460 per mile was less than the value of many of the land grants given to roads in the United States, while the engineering difficulties were known to be much greater. The risks of investments in a foreign country were also much greater than for a similar enterprise within our own borders; nor could it be expected that the development of the country would be as rapid as in portions of our own West. In spite of these obstacles, the National was fairly and well on the way to completion of its whole system when the financial condition—not of Mexico, but in the money centers of the world—brought construction to a stop. For some years it was not even possible to complete the gap in the main line between Saltillo and San Miguel. When, however, this was arranged and the road finished in November, 1888, it fairly began its work of building up and sustaining a profitable traffic. It is a pleasure to state that its management is all that could be desired, and that it is bound to become in the near future a profitable property. Such an enterprise, however, is not for a year nor for 5 years, nor should there be any lack of funds to enable it to keep well up in the race for traffic.

Recognizing the need of changing the gauge, an attempt was made a year or two since to secure some $8,000,000 for this purpose, but, unfortunately

for the property, the effort was not then successful. At present the change of the Texas-Mexican to a standard gauge and the laying of a third rail to Monterey are most urgent. If this were promptly done, its good results would, I am certain, secure the needed funds to change the rest of the main line, and thus put the road in shape to reap the full benefits of its unequaled location. With these betterments and the present capable management this ought, within 10 years, to be the best railway property in Mexico.

The following data are of interest to that large number of our citizens who already have invested or who are contemplating investing in Mexican railway securities, and is made more in detail because of the many inquiries received at this office.

I am indebted to Capt. W. G. Raoul, president, and Mr. Theodore D. Kline, general manager, for annual reports and other data.

Captain Raoul, in his report of March 13, 1891, gives the following figures as to the value of imports and exports through the custom-house at Nuevo Laredo and the amount of duties collected on imports, in Mexican currency:

Years.	Duties.	Imports.	Exports.
1886	$656,528.20	$1,128,029.84	$1,360,077.12
1887	751,533.64	1,974,162.84	1,257,464.11
1888	835,582.97	4,170,154.09	1,452,112.23
1889	1,519,306.78	8,786,982.13	3,078,836.59
1890	1,892,374.68	12,682,307.99	2,982,192.71

The following are statements, in United States currency, of the capital account, income account, etc., on December 31, 1890:

CAPITAL ACCOUNT.

Securities paid to acquire road:		
First-mortgage bonds		$2,000,000.00
Second-mortgage bonds (A and B)		24,330,000.00
Third-mortgage bonds (income)		7,040,000.00
Capital stock		33,303,750.00
		66,673,750.00
Less the following credits:		
Materials	$598,067.17	
Express property	2,148.15	
Bonds and stocks of other companies	4,022,750.00	
Texas-Mexican Railway account	192,086.57	
Texas-Mexican Railway betterment account	13,898.16	
		4,828,950.05
		61,844,799.95
Depreciation in above materials, as shown per inventory of November 30, 1889		130,194.20
		61,974,994.15
Less credits to railroad and property since January 1, 1889		4,240.02
		61,970,754.13

Expenditures since reorganization:		
Discount on sales, bankers' commissions, etc.	$1,681,106.54	
Betterments, old line	630,457.34	
El Salto lien	191,431.66	
Debts of old company	167,410.00	
Construction of new line, including Sabinas coal road surveys, coal explorations, and Matamoros branch survey (deducting $144,181.91 charged to capital reserve)	4,574,695.49	
Equipment of new line	956,328.74	
Reorganization expenses	529,437.57	
Interest reserve absorbed in 1888	650,000.00	
Capital reserve absorbed in 1888	112,552.00	
Capital reserve absorbed in 1889–'90	144,181.91	
		$9,637,602.15
Total		71,608,356.28
Bonds and stocks of other companies:		
Corpus Christi, San Diego, and Rio Grande N. G. Railway 7 per cent. bonds	$248,000.00	
Texas-Mexican Railway 6 per cent. bonds	1,196,000.00	
Texas-Mexican Railway stock	2,476,250.00	
Brownsville & Gulf Railway stock	25,000.00	
Texas-Mexican Northern Railway stock	100,000.00	
		4,045,250.00
Mexican National Railway's stock held for conversion of Texas-Mexican stock		23,750.00
Texas-Mexican Railway note	$209,387.79	
Texas-Mexican Railway coupons	121,460.00	
	330,847.79	
Less coupons in suspense	121,760.00	
		209,087.79
Balance to general balance sheet		1,533,555.93
Total		77,420,000.00
Capital stock		33,350,000.00
Bonded debt:		
First-mortgage bonds	$12,500,000.00	
Second-mortgage bonds (A and B)	24,530,000.00	
Third-mortgage bonds (income)	7,040,000.00	
		44,079,000.00
Total		77,420,000.00

INCOME ACCOUNT.

Disbursements.

Operating expenses (including Texas-Mexican Railway Company), were $2,927,961.89 in Mexican currency, which, reduced at 80 per cent., gives	2,342,369.51
Interest and discount	17,067.92
Increasing number of ties and ballasting	69,305.14
Replacement of rails	22,435.81
Replacement of locomotives	16,414.37
Expenses of London agency	6,399.44

Expenses in collection and distribution of subsidy		$4,031.51
Balance to net revenue account		504,185.94
Total		2,982,209.64

Receipts.

Gross earnings (including Texas-Mexican Railway Company) were $3,754,966.36, less Federal Government earnings (uncollected) of $45,542.56, leaving as net earnings $3,709,423.80, in Mexican currency, which, reduced at 80 per cent., gives		2,967,539.04
Exchange		14,670.00
Total		2,982,209.64

NET REVENUE ACCOUNT.

Interest on first-mortgage bonds:		
6 months to June 1, 1890		372,000.00
6 months to December 1, 1890		375,000.00
Accrued interest for month of December, 1890		62,500.00
Total		809,500.00
Net earnings of railroad during 1890, as per statement		504,185.94
Received from trustees of subsidy account of interest deficiency for year 1890		305,314.06
Total		809,500.00

GENERAL BALANCE SHEET.

Assets.

Second-mortgage bonds (A and B)		200,000.00
Texas-Mexican bond purchase of 184 Texas-Mexican 6 per cent. bonds, 712 Corpus Christi, San Diego, and Rio Grande 7 per cent. bonds at cost price, and expenses in connection therewith		763,670.27
Cash:		
New York	$39,988.20	
Mexico—J. M. Fraser, resident-treasurer, $160,082.78, and remittances in transit, $51,681.70, making a total of $211,764.48, in Mexican currency, which, reduced at 80 per cent., gives	169,411.58	
		209,399.78
Accounts receivable		352,122.21
Express property		2,091.73
Texas-Mexican State lands		15,024.50
Materials on hand		427,801.58
Total		1,970,110.07

Liabilities.

Balance from capital account		1,533,555.93
Pay rolls (Mexico office)	$112,544.89	
Vouchers:		
Mexico office	102,268.96	
New York office	3,039.60	
	217,853.45	

Accounts payable	$132,710.69	
Accrued interest for month of December, 1890	62,500.00	
Coupons of first mortgage bonds outstanding	23,490.00	
		$436,554.14
Total		1,970,110.07

Tables showing the earnings by divisions for the year ended December 31, 1890, in Mexican currency.

Sources.	Main line.	El Salto.	Matamoros and Brownsville.	Texas-Mexican.	Total.
Freight:					
Ordinary (including Government)	$2,331,793.95	$88,563.24	$16,571.70	$206,854.39	$2,643,783.28
Construction	11.34	24.22			35.56
Total freight	2,331,805.29	88,587.46	16,571.70	206,854.39	2,643,818.84
Passenger:					
Ordinary (including Government and baggage)	812,323.24	21,316.42	10,303.71	47,643.80	891,587.17
Express	119,795.24	3,075.46	550.21	5,730.09	129,151.00
Mails (United States)				10,436.24	10,436.24
Total passenger	932,118.48	24,391.88	10,853.92	63,810.13	1,031,174.41
Miscellaneous:					
Telegraph	16,888.43	627.78	225.14	2,768.57	20,509.92
Sundry sources	44,138.84	1,167.70	250.00	3,517.45	49,073.99
Cintura branch	10,389.20				10,389.20
Total miscellaneous	71,416.47	1,795.48	475.14	6,286.02	79,973.11
Total earnings	3,335,340.24	114,774.82	27,900.76	276,950.54	3,754,966.36
Total earnings for 1889	3,251,701.43	106,680.04	33,408.97	268,333.80	3,660,124.24
Increase	83,638.81	8,094.78		8,616.74	94,842.12
Decrease			5,508.21		

Table showing the expenses by divisions for the year ended December 31, 1890, in Mexican currency.

Description.	Main line.	El Salto.	Matamoros and Brownsville.	Texas-Mexican.	Total.
Conducting transportation	$739,527.99	$13,478.25	$9,418.30	$86,647.46	$849,072.00
Motive power	1,142,279.85	14,392.38	7,739.95	76,094.66	1,240,506.84
Maintenance of cars	156,898.95	2,197.64	736.53	11,935.95	171,769.07
Maintenance of way	372,577.68	14,229.00	5,471.32	66,763.50	459,041.50
Extraordinary expenses	1,294.08	150.00		1,476.36	2,920.44
General expenses	177,000.11	1,973.98	1,596.08	24,081.87	204,652.04
Total	2,589,578.66	46,421.25	24,962.18	266,999.80	2,927,961.89
Total for 1889	2,639,645.65	42,319.45	24,311.50	287,154.94	2,993,431.54
Increase		4,101.80	650.68		
Decrease	50,066.99			20,155.14	65,469.65

Table showing the net earnings by divisions for the year ended December 31, 1890, in Mexican currency.

Lines.	1889.	1890.	Increase or decrease.
Main line	$612,055.78	$745,761.58	+$133,705.80
El Salto	64,360.59	68,353.57	+ 3,992.98
Matamoros and Brownsville	9,097.47	2,938.58	— 6,158.89
Texas-Mexican	*18,821.14	9,950.74	+ 28,791.88
Total	666,692.70	827,004.47	+ 160,311.77

*Loss.

Table showing the number of miles run by trains for 1889 and 1890.

Description.	1889.	1890.
	Miles.	*Miles.*
Passenger trains	874,030.84	854,105.37
Freight trains	1,220,769.60	1,173,479.60
Work trains	89,743.23	47,796.40
Mixed trains	222,534.34	364,865.35
Total	2,407,078.01	2,440,246.72
Revenue trains	2,317,334.78	2,392,450.32
Engines	2,920,181.13	3,183,433.23
Distance operated	1,218.59	1,218.59

Table showing earnings and expenses per train mile for 1889 and 1890, in Mexican currency.

Description.	1889.	1890.
Gross earnings per mile	$3,003.57	$3,081.40
Operating expenses per mile	2,456.47	2,402.74
Net earnings	547.10	678.66
Gross earnings by revenue trains per mile	1.57 91/100	1.56 1/8
Operating expenses by revenue trains per mile	1.29 3/10	1.22 1/8
Net earnings	.28 1/8	.34 57/100

Table showing the passenger equipment for the year ended December 31, 1890.

Description.	Number.	Description.	Number.
Special service cars	6	Third-class cars	35
Special kitchen and dining (combination) cars	1	Third-class and baggage (combination) cars	6
Chair cars	3	Baggage cars	4
First-class cars	15	Baggage and express (combination) cars	9
First and second class (combination) cars	17	Baggage, express, and mail (combination) cars	11
Second-class cars	22	Total	131
Second and third class (combination) cars	2		

Besides the above, there are passenger cars not used in passenger train service, used by working crews, etc., including 2 condemned and 2 sold, in all 12, making a total of 143.

Table showing the freight equipment for the year ended December 31, 1890.

Class.	Capacity.				Total.
	22,000 tons.	24,000 tons.	30,000 tons.	40,000 tons.	
	Number.	*Number.*	*Number.*	*Number.*	*Number.*
Box cars	320	229	134	385	1,068
Stock cars	139	36	15	92	282
Coal and ore cars	13	55	.....	75	143
Flat cars	238	206	.....	190	634
Rack and open top stock cars	14	62	.....	.....	76
Water cars (iron and wooden tanks)	.....	5	.....	22	27
Cabooses	47	.....	.....	.....	47
Pile-drivers	.....	3	.....	.....	3
Derricks	.....	1	.....	.....	1
Total	771	597	149	764	2,281

Of the above freight cars, 46 are not employed in freight traffic for the reasons given, to wit:

Box cars used exclusively in work-train outfits, not serviceable for anything else	15
Box cars used as cabooses	5
Box cars used as offices, section houses, and warehouses	17
Box cars to be condemned, old and not worth repair	1
Stock cars condemned, old and not worth repair	1
Coal cars condemned, old and not worth repair	2
Flat cars condemned, old and not worth repair	5
Total	46

Table showing the make, class, size, and date of entry into service of locomotives for the year ended December 31, 1890.

Number.	Make.	Class.	Size of cylinder.	Drivers.		Date of entry into service.
				Diameter.	Number to each locomotive.	
			Inches.	*Inches.*		
1	Baldwin	Consolidation	16 by 20	32	8	May, 1881.
2	do.	Mogul	11 by 16	32	6	June, 1880.
3	do.	American 8 wheel	11 by 16	38	4	Do.
4	do.	Mogul	11 by 16	32	6	January, 1881.
7	Brooks	American passenger	12 by 16	38	4	April, 1879.
9	Baldwin	Consolidation	15 by 18	32	8	June, 1879.
10	do.	do.	16 by 20	32	8	April, 1882.
11	do.	do.	16 by 20	32	8	September, 1881.
12	do.	do.	16 by 20	32	8	July, 1881.
13	do.	do.	16 by 20	32	8	May, 1881.
14	do.	do.	16 by 20	32	8	Do.
15	do.	Mogul	14 by 20	40	6	August, 1881.
16	do.	do.	14 by 20	40	6	November, 1881.
18	do.	do.	14 by 20	40	6	Do.
19	do.	do.	14 by 20	32	6	August, 1881.
20	do.	Decapod	18 by 20	32	10	June, 1882.
21	do.	do.	18 by 20	32	10	January, 1882.
22	do.	Switch	14 by 18	32	6	November, 1881.

Table showing the make, class, size, and date of entry into service of locomotives, etc.—Cont'd.

Number.	Make.	Class.	Size of cylinder.	Drivers.		Date of entry into service.
				Diameter.	Number to each locomotive.	
			Inches.	*Inches.*		
23	Baldwin	Switch	14 by 18	32	6	December, 1881.
24	do	Mogul	14 by 20	40	6	Do.
25	do	do	16 by 20	32	8	May, 1881.
27	do	do	14 by 20	32	6	August, 1881.
30	do	Consolidation	16 by 20	32	8	December, 1881.
31	do	do	16 by 20	32	8	November, 1881.
32	Hinkley	Mogul	12 by 20	31	6	April, 1881.
33	do	do	12 by 20	31	6	Do.
34	Baldwin	Consolidation	16 by 20	32	8	July, 1882.
35	do	do	16 by 20	32	8	January, 1882.
37	do	Mogul	14 by 20	40	6	December, 1882.
38	do	do	14 by 20	40	6	February, 1882.
40	do	Consolidation	16 by 20	32	8	January, 1884.
41	do	Mogul	14 by 20	40	6	June, 1882.
42	do	Switch	14 by 18	32	6	August, 1883.
43	do	do	14 by 18	32	6	October, 1883.
44	do	Consolidation	16 by 20	32	8	July, 1883.
45	do	do	16 by 20	32	8	Do.
46	do	do	16 by 20	32	8	Do.
47	do	do	16 by 20	32	8	Do.
48	do	do	16 by 20	32	8	Do.
49	do	do	16 by 20	32	8	Do.
50	do	do	16 by 20	32	8	August, 1883.
51	do	do	16 by 20	32	8	Do.
52	do	do	16 by 20	32	8	Do.
53	do	do	16 by 20	32	8	September, 1883.
54	do	do	16 by 20	32	8	August, 1883.
55	do	Mogul	14 by 20	32	6	November, 1881.
56	do	Consolidation	16 by 20	32	8	September, 1883.
57	do	do	16 by 20	32	8	August, 1883.
58	do	do	16 by 20	32	8	February, 1884.
59	do	do	16 by 20	32	8	June, 1887.
60	do	do	16 by 20	32	8	Do.
61	do	do	16 by 20	32	8	April, 1887.
62	do	do	16 by 20	32	8	July, 1887.
63	do	do	16 by 20	32	8	March, 1887.
64	do	do	16 by 20	32	8	Do.
65	do	Mogul freight	14 by 20	32	6	June, 1883.
66	do	Mogul passenger	14 by 20	40	6	Do.
67	do	do	14 by 20	40	6	July, 1883.
68	do	Consolidation	16 by 20	32	8	January, 1884.
69	do	do	16 by 20	32	8	February, 1884.
70	do	do	16 by 20	32	8	December, 1883.
71	do	do	16 by 20	32	8	April, 1884.
72	do	do	16 by 20	32	8	December, 1883.
101	do	10-wheel passenger	14 by 20	40	6	September, 1887.
102	do	do	14 by 20	40	6	October, 1887.
103	do	do	16 by 20	42	6	January, 1888.
104	do	do	16 by 20	42	6	Do.
105	do	do	16 by 20	42	6	February, 1888.
106	do	do	16 by 20	42	6	Do.
107	do	do	16 by 20	42	6	Do.
108	do	do	16 by 20	42	6	Do.
109	do	do	16 by 20	42	6	Do.
110	do	do	16 by 20	42	6	Do.
111	do	do	16 by 20	42	6	Do.

Table showing the make, class, size, and date of entry into service of locomotives, etc.—Cont'd.

Number.	Make.	Class.	Size of cylinder.	Drivers.		Date of entry into service.
				Diameter.	Number to each locomotive.	
			Inches.	*Inches.*		
112	Baldwin	10-wheel passenger	16 by 20	42	6	February, 1888.
113	do	Consolidation "O" frame.	16 by 20	38	8	January, 1888.
114	do	do	16 by 20	32	8	October, 1888.
115	do	do	16 by 20	32	8	Do.
116	do	do	16 by 20	32	8	November, 1888.
117	do	do	16 by 20	32	8	Do.
118	do	do	16 by 20	32	8	Do.
119	do	10-wheel passenger	16 by 20	42	6	October, 1888.
120	do	do	16 by 20	42	6	Do.
121	do	do	16 by 20	42	6	Do.
122	do	do	16 by 20	42	6	Do.
123	do	do	16 by 20	42	6	Do.
124	do	do	16 by 20	42	6	Do.
125	do	do	16 by 20	42	6	Do.
126	do	do	16 by 20	42	6	Do.
127	do	do	16 by 20	42	6	Do.
128	do	do	16 by 20	42	6	Do.
129	do	do	16 by 20	42	6	May, 1889.
130	do	do	16 by 20	42	6	Do.
131	do	do	16 by 20	42	6	Do.
132	do	do	16 by 20	42	6	Do.
133	do	do	16 by 20	42	6	Do.
134	do	do	16 by 20	42	6	Do.
135	do	do	16 by 20	42	6	Do.
136	do	do	16 by 20	42	6	Do.
137	do	do	16 by 20	42	6	Do.
138	do	do	16 by 20	42	6	Do.
139	do	Consolidation "O" frame.	16 by 20	32	8	July, 1889.
140	do	do	16 by 20	32	8	Do.
141	do	do	16 by 20	32	8	Do.
142	do	do	16 by 20	32	8	Do.
143	do	do	16 by 20	32	8	Do.
144	do	10-wheel "O" frame	16 by 20	42	6	November, 1890.
145	do	do	16 by 20	42	6	Do.
146	do	do	16 by 20	42	6	Do.
147	do	10-wheel compound	(*)	42	6	Do.
148	do	10-wheel passenger	15 by 20	42	6	Do.
149	do	do	15 by 20	42	6	Do.
150	do	do	15 by 20	42	6	Do.
151	do	do	15 by 20	42	6	December, 1890.

*Upper, 17 by 20 inches; lower, 10 by 20 inches.

Engines Nos. 5, 6, 8, 17, 26, 28, 36, and 30 were suspended from service account, being too light to warrant repairs.

WARNER P. SUTTON,
Consul-General.

UNITED STATES CONSULATE-GENERAL,
Nuevo Laredo, April 20, 1891.

CURING CODFISH IN FRANCE.

REPORT BY CONSUL KNOWLES, OF BORDEAUX.

France is preëminently a fish-eating country. Two reasons may be assigned for this fact. The first is a rather arbitrary one, and may be assigned to natural inclination or a marked degree of taste in that direction. The second is more evident. France being a Catholic country, at least 1 day in every week—and very often more—is consecrated to abstinence from flesh meat. The consumption of fish, accordingly, remains not only great, but almost invariable year in and year out. Fresh fish are eaten in quantity in the larger cities, at the seaports, and along the coast, where they are plentiful, cheap, and always wholesome. In the interior, however, in the smaller and remote villages distant from both coast and water way, and especially among the peasantry, preserved or salted fish must of necessity take the place of the freshly caught article. In these last-named districts salt fish becomes the chief staple.

At the port of Bordeaux alone during the year 1890 there were discharged from vessels of various nationalities 61,136,165 pounds of salt fish, the greater part of which was cod.

Fresh codfish is a commodity unknown in France. *Morne verte*, which might be translated literally as green codfish, is the name given to that quality of fish prepared and salted aboard the Newfoundland fishing smacks and barreled and shipped in bulk to France. It is cooked and eaten after having been immersed for several hours in water. If, however, it is desirable to place upon the market for ordinary consumption a fish thoroughly cured, salted, and dried, the *morne verte*—which rapidly lose their virtue—are again dried and undergo more careful preparation in France, from whence they are afterwards exported in great quantities to Spain, Italy, Belgium, Russia, and, in short, to every country on the Continent.

The codfish-drying industry is by no means an unimportant one in Bordeaux, where are annually prepared for general European and home consumption more than 12,000,000 cod, an equivalent of 20,000 tons and representing in value $2,000,000. The establishments for codfish-curing at this city are situated in the near environs. At Begles, a little village a few miles distant, twenty-four separate factories are found.

A distant view of these curing establishments, or rather the fields surrounding them, convey the idea of a vast vineyard. Line upon line, row upon row of wooden and wire trellises from 3 to 4 feet in height extend across the undulating plain as far as the eye can reach, and upon these rudely constructed frames are hung innumerable fish, their split and divided surfaces exposed to the warm sunlight of early spring or the dry breezes of autumn.

Upon receiving at the factories the crudely prepared fish, covered merely with a light layer of salt, adhering in crystals to the half-moist surface, the

first process consists of removing this incrustation with an ordinary hard scrubbing brush and cold water, the cod being placed and firmly held upon a rough pine table for the purpose.

Until quite recently it has been customary in the various fish-drying establishments throughout the southwest or lowlands of France to cleanse the codfish by soaking the same in water barrels for a protracted period, the method being more economical than beneficial. In the flat, rolling country, the prairie lands, and marshes of this district water is far from abundant, brooks and stagnant pools serving as best they may for washing purposes, while wine alone is the beverage. But in the city of Bordeaux and its environs water is comparatively plentiful, and a few years since, municipal investigation into the fish-curing industry proving the unhealthy results that might possibly accrue from the repeated cleansing of salt fish in the same water, each and every person engaged in the pursuit was obliged to lay mains or water conduits from the nearest or most convenient source of supply, in order that fresh water alone might be employed.

Subsequently, and in conformance to the established regulations, there have now been constructed within the greater number of these factories long, narrow tanks, or sluices, built of stone or marble, about 5 feet in width and 2 in depth. A continuous stream of water is forced through these tanks, usually by the aid of a 1 horse-power engine; and inspectors require that an average of 288 to 311 gallons of water shall be used in the cleansing of 2,200 pounds of fish. At the sides are inclined deal-board tables, at which kneel those engaged in washing the fish.

After a vigorous and thorough scrubbing the cod are laid aside in great piles to await a day favorable to open-air exposure. Bright, clear weather, moderate temperature, and a slight northeasterly breeze are the most desirable conditions for drying, and these occur most frequently in the months of March, April, and October. Some of the midwinter months offer at times the required atmosphere, while the summer days, on the contrary, in the south of France are usually laden with too great a degree of humidity to be altogether propitious. Two days' exposure to the sun is counted sufficient, and it is estimated that about 150 days in each year present meteorological conditions favorable for drying.

Codfish, when ready for shipment, are packed in bales of 110, 132, and 176 pounds, representing from forty-five to seventy-five fish. Almost all of the smaller cod, those from 12 to 16 inches in length, are bought by, and shipped to, the Italian market. These, also, are of inferior quality, for it is evident that the Italians are not so fastidious in their tastes as their neighbors across the Mediterranean—the Spaniards—to whom not only are shipped the best quality, but the greatest quantity of codfish from France. To the former the fish are sold with the black outer skin undetached, while to the latter the same are not marketable unless this integument is removed. Hence we find that the charges made on 220 pounds of fish by the drying establishments to the dealer are itemized as follows: Drying, etc., 50 cents; re-

moving skins, 20 cents; packing, 30 cents. And here it may be observed, by way of parenthesis, that codfish-curing in France is an industry distinct in itself, the crudely salted merchandise being merely sent by the dealer or importer to the cleaning and drying establishments and returned to him by them as early as the weather will permit.

The fish-drying industry in the immediate neighborhood of Bordeaux gives employment to about 600 people, each employing, on an average, 20 workmen; and it may be roughly estimated that these are capable of washing, cleaning, and drying 55,000 pounds of fish per day. The men employed receive 70 cents and the women, who occupy themselves alone with removing the black skins of the fish, 30 to 40 cents per day.

The south of France is the principal market for prepared codfish. To Spain is exported annually about 11,000 to 15,000 tons; to Italy, about 2,000 tons. The Antilles, Algeria, and Portugal follow in their respective order.

The preceding report upon the method of codfish-drying practiced in this vicinity has necessarily been a brief one, the industry, owing to the primitive manner in which it is carried on, admitting of little expansion, certainly of but limited description.

HORACE G. KNOWLES,
Consul.

UNITED STATES CONSULATE,
Bordeaux, April 8, 1891.

DUBLIN NATIONAL AGRICULTURAL EXHIBITION.

REPORT BY CONSUL REID.

The Royal Dublin Society is one of the institutions of Dublin, and, for that matter, of Ireland. It has been in existence for many years, its purpose being to promote agricultural and other industrial interests of Ireland. Its membership is made up of the leading men from all parts of the country, who, as a rule, take an active interest in its affairs. It is a wealthy organization and has fine buildings on Kildare street, in the central part of the city, which are provided with an extensive and well-selected library. It also has extensive grounds at Ball's Bridge, at the outskirts of the city, embracing an area of 27 acres. These grounds are provided with extensive and permanent buildings specially arranged to suit the purposes for which they were designed and constructed. Upon these grounds and buildings have been expended upwards of £40,000. It is said by those who are competent to judge that the ground and buildings of this society are unrivaled by anything of the kind in the United Kingdom. All the industrial and agricultural exhibitions and important horse and cattle shows, etc., in Ireland are held under the auspices of this society and upon its grounds in Dublin. Several exhibitions occur annually, the most important of which, however, are the horse show in the autumn season and the exhibition of cattle, farm horses,

pigs, sheep, dogs, and machinery in the spring of the year. These exhibitions are patronized by the people, not only from all parts of Ireland, but from other parts of the United Kingdom as well. The annual show of the latter description was held this year from March 31 to April 2, inclusive.

Having devoted a day to the exhibition in question, I am enabled to make the following brief report as the result of my observations:

CATTLE.

This branch, of course, constitutes an important factor of the exhibition. This would naturally be the case, as the cattle interest is the most important and profitable of any branch of farming in Ireland. The annual cattle product of Ireland is upwards of £50,000,000 in value, a sum considerably more than all other agricultural products combined, and the exports in this line to England are considerably greater than from all other countries combined, including the British colonies.

The show of cattle on the occasion mentioned was very creditable and indicated that a good deal of intelligent attention is being given to the general introduction of the best breeds. The following table shows the number of each class on exhibition and the money prizes awarded to each group:

Breed.	Number.	Value of prizes.
Shorthorn	248	£161
Hereford	23	63
Aberdeen Angus	43	55
Red Polled	16	36
Ayrshire	9	30
Kerry	79	57
Dexter	34	21
Jersey	57	46
Guernsey	6	21
Derry	6	16

The show of cattle, in numbers and quality, at the recent exhibition was a little above the average. As may be judged from the comparatively large number, the Shorthorns are the favorite breed of cattle in Ireland, as beef producers, of course. The great majority of the 248 Shorthorns exhibited were bulls of all ages, from calves up to the oldest eligible for competition. In fact, it was substantially a bull show, showing that a great deal of attention is being given to bull-breeding. The quality of these animals, which is said to be improving every year, is of the very highest and, I believe, is not surpassed in any country.

The Herefords are also coming to be a favorite beef cattle here and are good for but little else. Although the number shown was not large, they were very select. Last year the show of Herefords was larger, including a herd from the stables of the Queen. The other favorite beef-producers of which there was a creditable exhibit were the Aberdeen Angus, or Black Polls,

and the Red Polls. The former especially is steadily gaining ground in Ireland, while the latter finds some favor as dairy cattle as well.

The attention which is being given to the breeding of these high grades of cattle in Ireland is bearing fruit, as a look over the stock yards in Dublin or elsewhere on any market day will demonstrate. The cattle, as they pass into the butchers' hands, are uniformly of excellent quality and would pass as prize cattle at many exhibitions; for example, I happened to learn of one sale that was made at the stock yards here recently where a herd of 6 brought the owner an average of £16 each in cash, and the ruling prices being at present very low here as elsewhere. The average value of the 4,240,753 cattle produced in 1890 was, according to reliable authority, £12 6*s.* 1*d.*, or $59.88, each.

The favorite dairy breeds in Ireland are the Jerseys and Kerries. I have never seen a finer representation of Jerseys than at the recent show here, and I question if they could be surpassed in any country, all thoroughbreds and of the finest quality. The Kerries, of course, are a purely Irish breed and have always been favorites, ranking, in fact, as milkers and butter-producers scarcely second to the Jerseys. The Kerries are a very small, black, hardy cattle, which derive their name from the county of Kerry, in the south of Ireland, where they have been most extensively bred. Not a little of the fame of the Cork butter is due to this excellent breed of cattle.

The Ayrshires, Guernseys, and Dexters (the latter being a collateral branch of the Kerry family) are also coming into notice as desirable dairy cattle, but as yet they rank considerably below the breeds above mentioned. However, they possess a merit that can not be urged for the Jerseys and Kerries, that they are fair beef-producers.

SWINE.

Under this head there were upwards of 100 entries, and there was awarded in the way of premiums £118 by the Royal Dublin Society and £125 by the Pig Improvement Association; total, £243. The pig industry is also a very important one in Ireland, the fame of the Irish hams and bacon being known far and wide and being largely exported to England, Scotland, and France. The total product of the island in 1890 was 1,570,279, representing a value of £4,399,025. The white Yorkshire and Berkshire are the favorite breeds, the former being latterly preferred. The pig which is most sought after by curers is white, long sided, with light shoulders and head, small bones, and with a preponderance of lean flesh. By lean flesh it is not meant that the animal should be insufficiently fed, but, as the lean flesh comes from the breed of the animal more than from the feeding, the most successful breeder pays particular attention to securing a suitable breed. Then, with good feeding and proper attention, accompanied with moderate exercise in the earlier stages of feeding, the results described are the best secured. The points which determine a well-bred pig here are: Hams—wide, deep, and full to the back; sides—long and deep; shoulders—thin and

light; head—wide between the ears; snout—longish and slightly dished; jowl—very light; ears—to be inclined forward, not to hang down; hair—long, fine, and silky, without bristles; color and bone—color to be white, bone not to be too strong nor yet too light, may be stronger in the boar.

HORSES.

The show of agricultural horses was excellent, but not extensive, there being 43 entries. The premiums distributed amounted to £185. The favorite breeds here are the Clydesdales and Shires, some fine stallions and brood mares having been exhibited; also some excellent specimens of draft horses, polo ponies, and asses. The great exhibition of horses, as I have stated, occurs later in the season.

DOGS.

A very important feature of the recent exhibition falls under this head, the total number of entries being 822. A large section of the buildings was given up to this purpose. In this country a good deal is made of the dog, as he is largely used for sporting and utilitarian purposes. The breeds exhibited some fine specimens of mastiffs, bloodhounds, St. Bernards, Newfoundlands, Great Danes, Irish wolf hounds, deerhounds, greyhounds, pointers, Irish setters, fox terriers, Irish terriers, Airedale terriers, Skye terriers, Dandie Dinmont terriers, Yorkshire or toy terriers, dachshunds, Blenheim spaniels, pugs, poodles, etc. A large number of valuable prizes were awarded in the way of money and silver cups. Thoroughbred dogs command a high price, even where they are supposed to be most numerous; for example, one of the dogs on exhibition, an Irish setter, was sold to the Earl of Shannon for £120.

AMERICAN AGRICULTURAL MACHINERY EXHIBIT.

This department constituted the most extensive single feature of the exhibition, and the space taken up for this purpose covered acres of ground, the arrangements being complete for all competitors. The list of competitors included but few Irish manufacturing firms, because there are but few of them. However, the fact of the presence, in large numbers, of extensive British manufacturers, and some leading American firms as well, in their immediate and expert representatives or in the persons of their Irish agents, plainly indicates that the Irish trade in the way of all sorts of agricultural implements and labor-saving machinery is worth looking after. It would be difficult and would require great space to enter into any considerable particulars under this head. Suffice it to say, in the main, that the exhibit covered the entire modern field of labor-saving implements and machinery, and in all departments there was as great, or perhaps greater, competition than is witnessed at a successful State fair in the United States. The dairy department especially received great attention and commanded marked and unusual interest. All sorts of goods and modern devices for working out results were exhibited, including cream-separators, milk-setters, butter-mark-

ers, and an infinite variety of churns and other articles too numerous to mention. Under all these heads American products were liberally represented and attracted their share of attention, especially including churns, butter-workers, cedar tubs, cedar milking pails, etc. (the sweetest wood for dairy use). One department was specially fitted up for practical dairy working. An expert young Englishwoman was in charge of this, who conducted the process of butter-making through all of its various stages, each step being accompanied by explanatory remarks. One point which contributes largely to desired results is that the hand of the operator never touches the butter. It is said that by the use of the hand heat is conveyed which breaks the minute grains of the butter, thus spoiling its preservative qualities, while the perspiration from the hands affects the product in a similarly injurious manner. Certainly the quality, being the very best, justifies the method pursued, and which is now highly commended by expert judges. Uniform temperature of material is also urged throughout the entire process of butter-making as being highly important. These practical lectures to the public have been instituted by the society as a means of promoting the general dairy interests of the country.

The exhibit of farm machinery and implements included 133 different stands, and, as I have stated, included everything known to modern farming industry and calculated to make it less laborious and more remunerative. In many departments American products were liberally represented and attracted a good degree of attention. In this line should be specially mentioned the mowers, reapers, and binders of Walter A. Wood, the McCormack reapers and binders, and the Buckeye mower and reaper. There is no doubt of the superiority of these machines over all competitors on this side. They are simpler in design, lighter of draft, easier of management, better finished, and, although somewhat lighter perhaps, are sufficiently strong for every test. These machines, particularly those manufactured by Wood, are great favorites here and have a wide sale. The introduction of the single-apron binder in the Wood machine is very much thought of here, being economical in its operation and promotive of the most satisfactory results.

In some other kinds of farm machinery I noticed a marked difference between the American and British products, the latter being much heavier and stronger. This is particularly true of hay-saving machinery and grain-separators. The trade in American hay rakes might be considerably extended here if they were made heavier and stronger, on account of the heavier crops grown, which make these requirements absolute. One of the best exhibits in that line on the grounds was that by the Oliver Chilled Plow Works, of South Bend, Ind. There was a considerable number of their famous chilled plows shown, and all were finished in most superb style, the shining mold-boards and the elaborately decorated woodwork making them almost fit for parlor ornaments. The fame of these plows being known far and wide, they are favorites here as elsewhere. There have been many imitations of the

Oliver chilled plow, but it still holds the front place in all markets. The moldboard especially is imitated, but there seems to be a preference in this country for the steel beam on account of its alleged greater durability.

American lawn-mowers were largely exhibited and are easily superior to those manufactured on this side. The Pennsylvania is a favorite here and has a wide sale.

The exhibition was otherwise varied and extensive, including a fine display of steam-engines, traction engines, water-wheels, sewing machines, sheep-shearing machines, vehicles, bells, and other foundry products for which Dublin is famous, and novelties without number. In water wheels and sewing machines American products were well represented and suffered nothing from comparison with foreign competitors. The exhibition, as a whole, was a fine success and would have done credit to any country.

ALEX. J. REID,
Consul.

UNITED STATES CONSULATE,
Dublin, April 15, 1891.

AMERICAN FIBER WARE IN MEXICO.

REPORT BY CONSUL DRAYTON, OF TUXPAN.

I have the honor to report, for the information and interest of the fiber-ware manufacturers of the United States (particularly, in this case, those of Mankato, Minn., and Lockport, N. Y.), that there is some misunderstanding or disagreement in the classification and manifestation of their manufactured fiber ware in this custom-house, the duties on them being placed so high that they are unsalable.

The goods are manufactured as wood or wooden fiber ware, but the custom-house classifies them as paper or pasteboard ware, which pays a duty of 45 cents per kilogramme; wood, 10 cents; copper, 30 cents; iron, 20 cents; brass, 30 cents; zinc, 20 cents; and leather, 60 cents per kilogramme; consequently, they are classed next to leather in duties. Therefore, these buckets or goods, after paying their duties, can not be sold for less than $1.50 apiece, which makes them unmarketable, and, as fines have been imposed on them for being manufactured as wooden fiber, it brings the cost price so high that they can not be sold at all for less than $3 apiece, which is a prohibition on the dealers in such articles.

The merchants who have imported these goods have complained to the Government about it, but, not having received any answer to their complaints, they have concluded not to introduce any more until some regulations are made about the classification of such goods.

JOHN DRAYTON,
Consul.

UNITED STATES CONSULATE,
Tuxpan, April 8, 1891.

THE ARGENTINE FINANCIAL SITUATION.

REPORT BY CONSUL BAKER, OF BUENOS AYRES.

I have the honor now to inform you that last week the Government received official confirmation from Dr. Plaza, its agent in London, that the national loan, which has so long been hanging fire, had at last been arranged and consummated, thus, with the proceeds, providing for the interest on the foreign debt for the next 3 years and giving the nation time to "take a long breath" and otherwise strengthen its financial condition.

It was supposed that with this assistance the immediate situation would be considerably improved; but the Argentine people had not recovered from its rejoicings when it was confronted with the intelligence that the National Bank and the Bank of the Province of Buenos Ayres, the two great financial institutions of the country (the first accredited with a capital of $40,000,000 and the other of $32,000,000, and each with deposits amounting, respectively, to double those sums), owing to bad management and reckless loans to Government favorites and political men of straw, were "in distress" and unable to meet the calls of their depositors, and that, unless the Government came to their relief, they would be compelled to close their doors, thus suggesting, if not opening, the way to an uprising among the thousands of workingmen who had placed their earnings in those banks for safe-keeping. The President, appreciating the situation, called a meeting of the members of the Bolsa, or Buenos Ayres Exchange, and suggested two alternatives for tiding over the trouble: either to make another issue of paper money of $100,000,000 in national money or to effect a home loan for that amount. Fearing that utter ruin would ensue to the country from still further watering the depreciated currency, a committee, after a full consideration of the matter, decided in favor of an immediate popular loan, the Government providing a week of bank holidays until the subscriptions therefor could be arranged. I inclose translations of the appeal of the committee and of the Government decree in reference to the terms of the loan. By extraordinary efforts (the foreign banks doing the most of the subscribing and the wealthiest natives very little of it) about $40,000,000 of the amount proposed has been raised, and the National Government, though needing more, has accepted the same at 75 cents on the dollar, the interest being 6 per cent., and the amortization 2 per cent., per annum.

Thus reinforced the banks in question opened their doors again on Friday last and have resumed their ordinary course of business, the run upon them thus far being of no great significance. There is no doubt that this action on the part of the President and the liberal advances made by the people have considerably eased the tension and lessened the acuteness of the situation. The premium on gold at once went down from $3.75 to $3.35, and there seems to be a better feeling in commercial circles, many, indeed, now assuming, with the assistance which the Government has re-

ceived at home and from abroad, that the crisis is now over. But not so does it appear to me. I look upon all these expedients as merely postponing the day of ultimate liquidation and collapse, unless the Government at once shuts down on the present system of banking and gets rid of the existing fraudulent currency. That the foreign population, in a great degree, share these fears will be seen from the articles which I herewith inclose from the Buenos Ayres Herald and Buenos Ayres Standard.

E. L. BAKER,
Consul.

UNITED STATES CONSULATE,
Buenos Ayres, March 14, 1891.

THE INTERNAL LOAN.—MANIFESTO OF THE COMMITTEE AND PATRIOTIC APPEAL.

[Inclosure 1 in Consul Baker's report.]

BUENOS AYRES, *March 9, 1891.*

To the people of the Republic:

After a long period of expectation, the exterior financial arrangements have now come to a conclusion, thus saving the credit and honor of the nation and giving our country the necessary relief, so that our strength, debilitated by the crisis, may be restored; but the crisis had advanced too far. Panic, threatening to ruin our greatest institutions, would prove the greatest of all disasters.

The "Camara Sindical," understanding the gravity of the situation, could not abandon the post marked as its own by the common danger, and convoked a meeting of the principal bankers, merchants, and business men to strengthen its views and advise on the course to be pursued. This meeting, comprehending the gravity and urgency of the situation, delegated full powers to this committee, so as to arrive more quickly and efficaciously at a conclusion.

From that moment this committee, in permanent sitting, has done its best to discover a course capable of mastering the great evil overhanging all. In its opinion, this could only be effected by one united effort of the people to subscribe the necessary funds or by an emission to enable the Government to satisfy its most urgent necessities.

The committee considered that a new emission at the present moment, when the depreciation of trust money is so enormous, would occasion greater evils and, whilst preserving certain interests of value to the minority, would ruin all the inhabitants of the Republic.

This idea, then, being unanimously rejected, the loan remained as the only method of salvation, and the committee did not hesitate a moment in accepting it.

When presented to the Government, the project was adopted, and now it only requires the support of the public to become a reality. The security to be given for this internal national loan is the most solid and well guarantied that has yet been issued in the Republic. It has the guaranty of the nation and of the banks receiving the money, in addition to the guaranty of the bills and securities to be handed over as security for the advances to be made.

Besides these securities, it has another of the greatest importance—the product of the loan will go directly into the "Caja de Conversion," which is directed by citizens of unstained probity and most honorable antecedents, who have the exclusive management, handling of, and guard over, the moneys subscribed by the public to this loan.

Thus, then, the loan is in itself an excellent business.

Taking the figure at 75, with 6 per cent. interest, it will give an annual interest of 8 per cent. Its accumulative amortization of 2 per cent. per annum and its interest are solidly secured, because the Caja de Conversion will receive the same in advance from the banks, which will make the rediscount from their funds; consequently, this loan, as a commercial

operation, is solid and lucrative. But its economical aspect, that is to say, its salutary influence over the welfare of the country is more important still. The loan will avoid a new emission, which would still further depreciate our currency and would reduce the fortune of every inhabitant of this country to the third or fourth part of what it is to-day.

The loan will preclude this enormous loss, and every subscriber to it will secure his own fortune by a solid and lucrative operation. The conflict being thus settled and general peace of mind restored, this loan will prove a fresh economic force which will serve to combat the crisis by facilitating discount by the banks, thus serving to restore to commerce, to trade, and to production in general that capital which is now withdrawn.

The committee wishes to lay down one final and most important consideration in asking the public to subscribe to this loan. When a nation, in the sorrowful situation in which we now are, has the virility to make a supreme effort to save itself, it thereby conquers the sympathy and admiration of the world and shows itself, even in its misfortunes, worthy of respect. France, redeeming its territory with its loan, was greater still than on the field of battle. We, making this internal loan, will show Europe that we are capable of making sacrifices as great as our past errors, which we have strength to redeem, and that it is dealing with a capable, worthy, and virile nation.

The task, difficult as it may seem, is not so in reality, for we have already received subscriptions to the sum of $20,000,000 initiated by the banks, whose conduct is worthy of the greatest praise.

The support of the people is all that is now needed to realize this work, pregnant with the most fruitful results for the benefit of the nation, and this is what this committee, in the name of our common salvation, now asks.

FRANCISCO URIBURU,
President,
ERNESTO TORNQUIST,
H. E. ANDERSON,
ALFREDO DEMARCHI,
MANUEL S. AGUIRRE,
A. E. BOWEN,
GUILLERMO PAATS,
JUAN MAUPAS,
JUAN CAÑAS,
M. CORREA MORALES,
CASIMIRO DEBRUYN,
ALBERTO I. GACHE,
Secretary.

DECREE OF THE PATRIOTIC LOAN.

[Inclosure 2 in Consul Baker's report.]

(1) In compliance with the decree of the National Government, dated 8th instant, an internal national loan of $100,000,000 is opened to the public in bonds of 6 per cent. and 2 per cent. amortization, annual accumulative, at the following places: Caja de Conversion, Camara Sindical, private banks. The Camara Sindical and the banks will give provisional receipts, which will be afterwards exchanged for certificates of the Caja de Conversion.

(2) The 10th, 11th, and 12th instant are hereby designated for the purpose, the lists to be closed on the latter day at 6 p. m.

(3) During these 3 days subscribers will receive the bonds at 75 per cent., but afterwards the Caja de Conversion will fix the rate, which must not be lower than 80 per cent.

(4) The conditions of payment are: 25 per cent. cash on subscribing, 25 per cent. on or before April 2, 25 per cent. on or before May 2, thus making 75 per cent. for every bond of $100 delivered.

(5) Payments can be anticipated, getting the usual discount, computed at 8 per cent. per annum.

(6) Provisional nominal certificates for the value subscribed will be issued, and will be transferable by simple indorsement, the holder of the certificates being always responsible for its obligations and liabilities.

(7) If any of the quotas be not paid on maturity, all those previously paid are *ipso facto* considered lost.

(8) In case the amount be oversubscribed, allotments will be made to all subscribers in equal proportions.

(9) By article 10 of decree, in case the Government should consider the amount subscribed insufficient for the requirements, the executive will declare the loan without effect, and all the sums subscribed will be returned by the Caja de Conversion.

MANUEL A. AGUIRRE,
President,
ALBERTO AUBONE,
Secretary.

THE SITUATION.

[Inclosure 3 in Consul Baker's report.—From the Standard of March 14, 1891.]

After the painful suspense of so many days, when the market swayed from Scylla to Charybdis, between the wreckage by "curso forzoso" or the wholesale ruin of fresh paper issues, between financial disruption and political dissolution, it is satisfactory to record a radical change for the better in all quarters. Affairs in general showed yesterday unerring signs of improvement, and the city, which last week was in the meshes of a panicky thralldom, revealed in a funeral calm, deserted streets, and daily and nightly alarm, has at last regained its old, busy, and familiar appearance. The market looked rejuvenated, now that the last bugbear (disorderly elections) has vanished. Strange to say, very many people apprehended serious disturbances at Sunday's elections. They had survived the financial dangers of the week by appealing to a patriotic loan, but they failed to see to what powers they could appeal to avert the dreaded political ebullition over the election of two senators. Happily for all, the elections passed off quietly, and the week has opened under most favorable auspices, with a firmer tone in the stock market, a falling gold premium, and a more general feeling of confidence in the future. *Esto perpetua.*

After the dangers from which the market emerged unscathed last week the course we are now pursuing appears relatively smooth and encouraging. We have escaped the rocks, but the financial ship is still in the midst of a terrible gale, and the haven is as distant as ever; for London "Moratoria" and patriotic loans may prevent us from sinking immediately, but will not put us on the right course. These reflections are suggested by the buoyant and hopeful feeling that seized the market yesterday in a fit of revulsion after the trials of last week. In the hearty congratulations tendered to the gentlemen who formed the committee of the loan, in the mutual admiration at the glowing success of that patriotic effort, people are apt to forget that the crisis is as stern a reality as ever, though the Provincial Bank has been saved from a summary execution at the hands of its depositors. Meantime the thanks of the country are due to the men who came forward in the emergency, and who, by means of a loan and admirable perseverance to carry out same, have saved all from the ruinous results of fresh paper issues and other financial absurdities. Their names are known to all; they deserve the gratitude of the public.

The loan committee have scraped together $40,000,000. This respectable amount has a great moral influence, and the effects of same could be seen yesterday in the hall of the Provincial Bank, where the run for deposits had diminished to insignificant proportions. At noon we counted 70 people in the hall; at 2 p. m. there might have been 100, no unusual number in the first day of the week. The halls of the Italian and English banks in the

Calle Fiedad and Reconquista were more crowded than the Provincial Bank, and it appears that much paper money that had been stowed away in old stockings, mattresses, etc., in the weeks of growing distrust is now finding its way back to the vaults of the banks. There could be no better proof of a sudden revival of confidence than the extraordinary number of new accounts daily opened in the private banks.

In chronicling the different phases of the situation, it is necessary to remark that politics are playing a very important part in the improvement that became so remarkable yesterday. At an early hour it was known that ex-President Mitre had arrived the night previous in the Spanish steamer *Alfonse XIII* at Montevideo. It can not be disguised that very great importance is attached to his arrival, as it is expected that he will unravel the present melancholy situation, consolidate politics, and redress finances. There are many who are convinced that all the monetary woes of the country spring from political causes. The believers in this financial doctrine are the majority, and, as they are satisfied that the returning ex-President will assume the reins of power ere long, they see in that very fact the much-desired panacea to remove all the irregularities that have caused and are still causing the terrible depreciation in the currency. Furthermore, it is known that the two great political parties which recognize as chiefs the two ex-presidents Mitre and Roca will make a great patriotic effort to avoid any electoral disturbances and arrive at some kind of compromise satisfactory to them as partisans and to the country at large. We can offer no opinion on such matters, but merely chronicle facts and reports that are supposed to be very intimately connected with the improvement in the situation. We may state that when General Mitre left on June 1 last year gold stood at 130 per cent. premium; it stands to-day at 234 per cent.

You could feel the pulse of the market yesterday throbbing with fresh vitality as the buoyancy of feeling put gold down ten points and infused new blood into stocks. When gold fell to 334, say 234 per cent. premium, the whole market looked radiant with satisfaction, and a smile flitted over the countenances of unfortunate stockholders as their shares in epileptic fits sought to rise above the low prices of last week. Importers looked forward to a revival of business, and dealers seemed more inclined to buy. The very exporters, who are the only people who are apparently benefited by the depreciation of the currency, greeted the improvement as a signal for fresh activity. The situation, in fact yesterday was a great revival, a powerful struggle of the market to shake off the nightmare of last week. But how long will this last? If we pin our hopes to nothing more effectual than a patriotic loan, the revival can not last long; it must fizzle, like generous champagne.

THE SITUATION, PRESENT AND PROSPECTIVE.

[Inclosure 4 in Consul Baker's report.—From Buenos Ayres Herald of March 14, 1891.]

The popular loan has reached a sum of some $35,000,000 according to the subscription list, so that we might count on not more than $40,000,000, unless some syndicate in Europe should undertake a considerable sum. The minimum sum necessary to save and equip the Provincial and National banks was fixed at $100,000,000, so that the possible $40,000,000 will be just two-fifths of the smallest sum necessary for the emergency, and yet the Government accepts the popular loan as far enough advanced to warrant reliance on that measure to meet the emergency. The large subscriptions are very generally in, and of those that will now come many will be necessary to make $5,000,000 yet to be found before the above estimate of $40,000,000 is secured.

It may be just as well to forego the pleasure of a little patriotic rhetoric, and try and get at the underlying facts and conditions of the situation, and direct our thoughts in the direction of what will now be done. One point is settled. The internal loan has now reached a respectable sum, which the Government accepts and will use, as far as it goes, but what will be done when $40,000,000, more or less, shall have been exhausted? That it will soon be used up by withdrawals of deposits in our tottering banks, there can be no reasonable doubt. The

public who have deposits in these banks do not reason nor think, but follow instinct, fear, and prejudice. They gain nothing in withdrawing deposits, for these same deposits consist of the notes of these banks and of those which are not worth so much, and, when they can not pay deposits, the latter will not be worth the drawing; but, we repeat, the public do not reason, but rush, like a lot of sheep following a blind instinct, into a ditch or into green pastures with the same alacrity. This loan will be made up of money now in other banks, and it will be drawn out and find its way back to the same place, as surely as would water dipped from its deposit and poured on surrounding ground—and then what? Very clearly a new emission. The President is reported as saying that this shall not be, but we have learned that presidential promises are fallible; indeed, a denial of the most emphatic character has preceded every act of inflation, beginning with President Roca, who declared that he would sooner cut off his right hand than sign a decree suspending specie payments, and within a week signed it with his right hand, and still he has two hands; and from then till now similar denials have been the sign foretelling the coming event, and so will it be in this case. The loan will soon be exhausted, and then in some form there will be a new emission; and the wise man will govern himself accordingly. The current of events is stronger than our own strong President. The only question, then, worth discussing is the nature of the coming emission. Upon this point the press and public should open fire to avoid the disaster of the proposed metallic note issue.

MEXICAN ORANGES FOR THE UNITED STATES.

REPORT BY CONSUL SMITH, OF NOGALES.

The following table shows the quantities and value of oranges exported to the United States through the Nogales consulate from 1884 to 1891:

Period during which exported.	No. of boxes exported.	Value (Mexican).
December 20, 1884, to June 8, 1885	5,740	$10,993
December 18, 1885, to May 6, 1886	7,145	10,922
November 6, 1886, to March 30, 1887	7,955	14,654
November 5, 1887, to April 14, 1888	13,823	13,026
November 20, 1888, to April 6, 1889	9,857	15,241
November 4, 1889, to March 17, 1890	13,899	26,424
November 2, 1890, to February 19, 1891	18,346	34,607
Total	76,765	125,867

Oranges in bulk were reduced to boxes with the average number of 145 to the box. The 18,346 boxes shipped in 1890–'91 were distributed as follows: Los Angeles, 630; Kansas City, 5,097; Chicago, 3,303; Lincoln, Nebr., 330; Nogales, 336; San Francisco, 501; Omaha, 990; St. Joseph, Mo., 2,629; Sioux City, 990; Denver, 2,265; Albuquerque, 945; Minneapolis, 330.

DELOS H. SMITH,
Consul.

UNITED STATES CONSULATE,
Nogales, February 19, 1891.

THE BANK OF FRANCE.

REPORT BY CONSUL KNOWLES, OF BORDEAUX.

INTRODUCTORY REMARKS.

When, in the month of November, 1890, the great commercial center of the world was trembling upon the verge of a financial crisis; when one of the oldest and most reliable of banking houses was forced to yield to an excessive and unlooked-for pressure suddenly brought to bear upon them and to declare their suspension; when every bank, fearful of a crash, was rapidly calling in its loans; when the entire atmosphere of finance was filled with doubt, misgiving, and uncertainty, and the rate of interest and discount mounted with an almost unprecedented rapidity, the Bank of France, calmly surveying the situation and availing itself, at the same moment, of a favorable opportunity for a mighty *coup d'état* and of making an advance upon exceptionally advantageous terms, unlocked its coffers, withdrew a small portion of its reserve fund, loaned the Bank of England the sum of $15,000,000 in gold, and so averted a panic.

There is something more than of passing significance in this event, this action on the part of the Bank of France. It must not alone be regarded as a mere offer of prompt and valuable assistance on the part of the nation to a money market in an hour of financial peril. There is something in it of more vital import than that; for there is not to-day, nor was there then, on the Continent of Europe a country that could, under similar conditions, have rendered like service both to itself as well as to another.

The occurrence marks the affluence of a prosperous and conservative people, the potency of a gigantic financial institution. It indicates the soundness, the resources, of a perfect banking system.

ANNUAL STATEMENT.

The annual statement of the Bank of France for the year 1890 was laid before the directors and shareholders at their last general meeting, and it further demonstrates the stability and firmness of this institution.

The general operations of the bank for the year 1890 amounted to $2,594,876,209, as against $2,471,048,499 for 1889, showing an increase of $123,827,710. This augmentation gives rise to especial remark when it is remembered that the preceding year was that of the great Exposition Universelle. The discounting of notes alone represents in itself more than two-thirds of this increase, amounting in 1889 to $1,771,808,009 and in 1890 to $1,854,689,084; increase, $83,881,075.

The State securities of the bank on the 29th day of January, 1891, proved the amount in hand as such to be equal in value to $235,757,953. The metallic reserve on December 31, 1890, was $455,673,000, of which $216,160,000 was in gold and $239,513,000 in silver.

Operations in advances upon securities and upon accounts current resulted in a decided increase. In 1889 they amounted to $137,525,797 and in 1890 to $156,626,119, an increase of over $19,000,000.

The general transactions in specie, bank notes, and transfers of the central bank show a slight decrease. In 1889 they amounted to $11,716,485,933; in 1890 the amount was $11,694,683,881; diminution, $21,802,052.

The total value of securities deposited during 1890, both at Paris and in the provincial branch offices, amounted to $106,717,400, a diminution of $8,505,124 from the year preceding.

The rate of discount, which on February 7, 1889, was fixed at 3 per cent., has remained, notwithstanding the fluctuations in other countries, unchanged from that period up to the present moment. In Great Britain during the past year the rate of discount has stood as high as 6 per cent.; in Russia and Germany, 5½ per cent.

And here it may be proper to observe that the Bank of France is preeminently a discounting institution, assuming—and justly, too—great credit for maintaining, directly to the benefit of the inhabitants of France, a moderate and uniform rate.

In order to appreciate the results which were embodied in, and produced by, the constitution of the Bank of France, and especially as regards discount and exchange, it will suffice to compare the respective rates in France with those of the three great banks of issue in Europe during the last 10 years. By doing this, it is clear that in France alone the rate of discount has remained, scarcely without variation, at 3 per cent. from 1884 up to the present time; or, to be more exact, the average rate of discount for the past 10 years has stood at 3.19 per cent., while in neither England nor Germany has it remained stationary for a single period of 12 months. In the German Empire the average discount rate since 1880 has been 3.93 per cent.; in England, 3.5 per cent.

With these figures before them, the French can not be lacking in appreciation of the advantages offered by their banking system, for we may compute that English merchants and manufacturers pay in excess of the French for the discounting of their notes 0.31 per cent.; the Germans, 0.74 per cent.; the Austrians, 0.85 per cent.; the Italians, 1.10 per cent. And, further, if we look to the fact that the discount rate of the Bank of France regulates the rate of discount of other banking houses throughout the Republic, we can estimate that the average saving that French merchants have realized and do realize thereby amounts to over $3,000,000 annually.

The chief element that preserves and regulates the uniformity of the discount rate in an institution like that of the Bank of France is its reserve of bullion. For, as this reserve at the same time receives unto itself, as well as disseminates the money in circulation throughout the country, it is evident that, if it diminish, the bank is at once obliged to protect itself against demands by raising its rates. This condition is frequently observed in England, where the proportion of the bank reserve is insufficient to meet the extension

or suddenness of commercial exigencies. Thus in the last-named country the rate of discount is subject to frequent variation and is affected by the slightest fluctuations of the commercial or financial market.

It will be of interest to note, upon the Continent of Europe, and especially in England, France, and Germany, the close relationship preserved between the rates of discount and metallic reserve. Taking as examples the two last-named countries and comparing the kinship of these material and immaterial substances for the years 1888, 1889, and 1890, we find that in 1888 the Bank of France had a metallic reserve of $444,093,000; in 1889, $474,973,000; and in 1890, $455,673,000. The corresponding rate of discount was respectively 3.07, 3.13, and 3 per cent.

In 1888 the reserve of the Bank of Germany amounted to $217,704,000; in 1889, to $209,984,000; and in 1890, to $188,175,000. The average rate of discount during the same period was as follows: In 1888, 3.32 per cent.; in 1889, 3.67 per cent.; and in 1890, 4.53 per cent. On the 31st day of December, 1890, it stood at 5 per cent.

To return again to the text of the bank's statement, from which I have for a moment departed to more minutely direct our attention to the evenness of the discount rates and the advantages derived thereby:

In January, 1891, there were 20,975,873 bank notes in circulation, representing a value of $612,410,602.

The liquidation of outstanding accounts up to December 24, 1890, amounted to $267,735.

The deposit of securities in Paris reached the sum of $716,138,000, an increase of $65,620,000 over 1889. At the branch offices at Bordeaux, Lyons, and Marseilles, where deposits of securities may likewise be made, the same amounted to $108,580,835, an increase of $5,018,000 over the year 1889.

Passing from the headquarters of the Bank of France at Paris to the sub-offices in the provincial cities, we find that, so far as general business is concerned, the city of Lyons takes first rank, superseding Bordeaux, which in 1889 was the most important branch. The total amount of banking business done at Lyons for the year 1890 is represented by the sum of $129,412,116, an increase of $16,212,000 over and above 1889.

The books of the bank at Bordeaux show transactions amounting to $117,291,039, being an increase of $3,377,500 over 1889.

Marseilles is next in point of order, their accounts for the year showing a business of $112,709,240, an increase over 1889 of $17,177,000.

Lille occupies the fourth place, the total amount of business transacted being represented by $75,375,590, an augmentation over the preceding year of 1889 of $3,667,000.

Last in order for the branches enumerated under the first class comes Havre, accounting for transactions to the sum of $70,218,630; increase, $11,194,000.

Regarding as a separate issue the discounting of notes by these several branches, it is found that the bank at Marseilles heads the list, the paper discounted thereat during the 12 months of 1890 representing a value of $93,040,397. Lyons and Bordeaux follow, the former having discounted notes to the value of $88,045,461, the latter $87,993,814.

As to net profit derived from its general transactions, the Bordeaux branch preserves, as it has for some time past, first rank, the net receipts for 1890 being $242,480; respectively follow Marseilles, profits $187,776; Lyons, $114,762; Havre, $100,136; and Roubaix-Tourcoing, $87,723.

Bordeaux again ranks first as having received on deposit securities of the highest value. During 1890 16,414 certificates of stock, bonds, etc., were placed for safe-keeping within its vaults, representing a value of $42,392,797. Marseilles follows with a deposit of 19,345 securities, amounting in value to $36,625,513. Third in order is Lyons, where the number of securities deposited was 15,671; value, $29,512,524.

Out of 258 branches of the Bank of France, the books of only 16 show a deficit for the year 1890.

The advances made by the bank to the State amounted in 1890 to $27,020,000.

The dividend paid to stockholders, the bank's stock being divided into 182,500 shares, the par value of each being 1,000 francs ($193), was $30.30 per share.

This, then, is the accounting presented by the Bank of France for the year 1890. This is the balance sheet of an institution which has locked up within its vaults more money—actual money—than the five greatest European banks of issue combined, namely, those of England, Germany, Belgium, Austria-Hungary, and Italy.

The Bank of France derives its charter from the State, which, in consideration of a specific agreement, namely, the loan of certain moneys at a regular rate of interest, grants to it the privileges already enjoyed. Just how much closer the bank is allied to the State it would be not only superfluous, but wearisome, to explain, for, since its establishment by Napoleon Bonaparte in 1806, its charter has been repeatedly renewed, and its franchise again and again revised and modified. The privileges expire in 1897. Proposals for their renewal, however, have already been placed in the hands of the minister of finance, and certain amendments and alterations offered for both his consideration and the consideration of the National Assembly. The minister has reported favorably on the proposals made on the part of the directors of the bank; nor could he well have done otherwise, as they pay, or will pay, dearly enough for its existence.

For a renewal of its charter for a term of 23 years dating from 1897 the the bank engages to disburse in favor of the State, from the moment of the renewal being granted until the year 1897, an annuity of $328,100, and from thence until its expiration the sum of $482,500 per annum. In addition to this, it agrees to pay $173,700 alone for the privilege of issuing bank notes.

It further proposes to annul the interest paid by the State upon two important loans made to it, one of $11,580,000 in 1857 at 3 per cent. interest, the other of $17,177,000 in 1878 at 1 per cent, nor will these loans be called in before the year 1920.

A report recently submitted to the French Chambers, in commenting upon the manner in which the Bank of France has used its privileges, says:

> An indication of the constant desire of this institution to serve the public, even at the detriment of its own interests, is to be found in the fact that the net profits of the bank have not in all cases followed the progressive figures of its operations. These operations, since the last law prolonging the privileges of the bank, have nearly doubled, and yet the dividends declared differ but little from those distributed in 1857, showing conclusively that the institution, in extending the sphere of its transactions, has desired less to increase its earnings than to benefit the nation.

Nor are these statements exaggerated. The innumerable services that the Bank of France has, from its commencement, though more especially in recent years, rendered the nation can not be overestimated. When, in March, 1871, 6 months after the surrender of Napoleon at Sedan, the defeated Empire, or rather the newly proclaimed Republic, agreed to pay to Germany an indemnity of $965,000,000, few believed that the country could ever discharge such a stupendous obligation. Within 2½ years from that period the enormous sum had, by the aid of the Bank of France, never failing in its efforts to aid the State, been completely liquidated.

For 80 years and more have the wheels of this mighty engine of finance revolved, unaffected by the misfortunes, vicissitudes, and disasters through which France has passed, receiving and disseminating, in conjunction with the treasury, now the Empire's, now the Republic's fund, year by year gaining in strength and vigor, until to-day it stands, by virtue of its admirable management, incontestibly and preëminently the foremost bank of the world.

HORACE G. KNOWLES,
Consul.

UNITED STATES CONSULATE,
Bordeaux, April 28, 1891.

THE POOR LAWS OF DENMARK.

REPORT BY CONSUL-GENERAL CARR, OF COPENHAGEN.

Throughout this Kingdom whoever can not maintain himself is given the necessaries of life by the parish authorities, and none are permitted to go naked or starve or be without shelter.

If a man accepts, either for himself or his family, support as a pauper, he loses his political rights or privileges.

If persons, after having been paupers, become able to do so, they are obliged to pay back the money paid by the municipal authorities for their support while paupers.

Paupers are given aid and support in proportion to their needs, either in the houses where they are found, in public poorhouses, or are put out to be cared for.

The above is substantially the poor law as hitherto in force in Denmark.

The late Rigsdag provided that giving out the care and maintenance of paupers to the lowest bidder, as has been heretofore the practice, is hereafter prohibited.

Husband and wife must not be separated if they conduct themselves properly.

Aged and feeble persons must not be placed where they will be disturbed or annoyed, and children must not be placed under immoral influences.

A person who has received aid as above from his parish is to be regarded as a debtor to the parish, and also by receiving such aid loses his political rights; but, upon entirely maintaining himself and his family after having received aid as a public pauper, his political privileges are restored and he is discharged from indebtedness.

Pensions are hereafter to be provided for the aged native and naturalized citizens, men and women who have completed their sixtieth year and are of good character, not having been convicted of crime, and who have not, for the benefit of their children or by improvident living, impoverished themselves and who have lived for the 10 years immediately preceding without having received relief. All such persons are to be supported and provided for during their declining years, not as paupers, but as pensioners, losing none of their political rights.

To carry out this provision the General Government of the Kingdom appropriates 2,000,000 francs to contribute to the parish funds in proportion to the sums expended in each parish, provided that no parish shall receive more than one-half of the sum expended for this purpose.

CLARK E. CARR,
Consul-General.

UNITED STATES LEGATION,
Copenhagen, April 6, 1891.

A FREE PORT AT COPENHAGEN.

REPORT BY CONSUL RYDER.

I have the honor to report that the bill establishing a free port of entry at Copenhagen, referred to in my report of December 1, 1887, has finally passed both houses of the Danish Rigsdag, and is now a law.

It is calculated that the expenses for this project will amount to 10,038,000 kroners, or about $2,690,184 in our money.

The most prominent features of the free port are that the whole area within its prescribed limits and all the trading and manufacturing establishments erected thereon will be considered as "foreign territory," not subject

to custom duties or regulations until goods stored or manufactured within the free port (domain) are actually sold and transferred to parties in the country, when such goods will be treated as other imported wares.

Considering the geographical position of Copenhagen in relation to all the Baltic provinces, whose many important cities and harbors generally are icebound for several months of the year, it is evident that the establishment of a free port at Copenhagen will open a wide scope for mercantile and manufacturing enterprise, as well for foreigners as for citizens of this country.

The free port will be divided into a mercantile and industrial department. The management of both is to be left in the hands of a joint stock company, to be organized under the auspices of the Landmandsbank of this city, one of the most prominent banking institutions of this country, and under certain rules and regulations. The said stock company is to furnish 4,000,000 kroners ($1,072,000) for the erection in the mercantile department of the free port of the requisite buildings and institutions and for the laying down of railroad tracks, etc., in the industrial port, while, on the other hand, it is to divide the total income from the running of the establishment with the Copenhagen harbor department in a certain specified proportion. Stipulations are made for a considerable extension of the free port domain, if the development of the institution should require it.

The Danish Government reserves to itself authority to prohibit the manufacture within the free-port region of such articles as in the manufactured state are duty free, while, according to the present tariff, the raw materials of which they are manufactured are liable to customs duties. This has especial reference to the printing of books, the manufacture of oleomargarine and of artificial manure, etc.

In the arrangements with the said joint stock company it is further provided that the managing members must be natives and Danish citizens; that the secretary of the interior may appoint part of the managers; that the domicile of the company is to be at Copenhagen; that the company shall be subject to the rules and regulations of the State with regard to the custom-house control; and that the company shall not be obliged immediately to expend more than half of the 4,000,000 kroners.

The entire free port is to be ready for traffic not later than 2 years after the cession to the company of the requisite area.

The above are the principal features of this very important project.

HENRY B. RYDER,
Consul.

UNITED STATES CONSULATE,
Copenhagen, March 31, 1891.

IRISH VS. AMERICAN BACON AND HAMS.

REPORT BY CONSUL REID, OF DUBLIN.

Referring to my report on curing bacon and hams in Ireland, transmitted with my dispatch of September 18, 1890, I beg leave to say that said report was copied from the CONSULAR REPORTS and republished in a London trade paper in its issue dated April 11, 1891. This republication has led to more correspondence between a Limerick firm and myself. This firm, for itself and two other houses,* denied the truth of the statement contained in my report to the effect that "large quantities of American hams are purchased by one of the chief pork-packing concerns of Limerick, which smokes them, impresses its own brand upon them, and sells them as its own goods." The said concern also called upon me for my authority for this statement. I replied, giving my authority, without mentioning names, as a responsible curer and a responsible retailer in this city. At the same time I stated that, if the firms mentioned considered that injustice had been done them and wished to join in a denial of my statement, I would offer such denial for publication in the next CONSULAR REPORTS. To this communication I received the inclosed reply, which is marked inclosure 1.

In the light of developments I have inquired further as to the practice of Limerick firms. Salesmen generally and some dealers admit to me verbally that American hams and bacon are largely sold as Irish meats in one way and another, but, in view of possible trouble, they are unwilling to have their names or knowledge used to substantiate the statement that the practice of particular firms is as presented in my report.

In this connection, I may say that I am informed that no installment of hams will be received in France from Irish curers unless the invoice is accompanied by an affidavit setting forth that they are Irish meats, which fact, I think, affords strong presumptive evidence at least that the practice of some curers is or has been as I have stated. I transmit herewith a copy of such an affidavit (inclosure 2), which accompanies all shipments of the firm named. This affidavit is published as an advertisement in the Dublin

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*The paragraph in Consul Reid's report to which objection is made is as follows:

"The retail price of American hams in this and other Irish markets is from 6*d.* to 7*d.* (12 to 14 cents) per pound, or about one-third less than the local product commands. This is the case where they are sold as American goods; but, as the result of careful investigation, I find that one of the chief pork-packing concerns at Limerick buys great quantities of American hams in the cured state, smokes them, impresses its own brand upon them, and places them upon the market at a price only a trifle below what it asks and receives for its own goods. Manifestly it is for the interest of the American producer, if he would extend his European trade, besides endeavoring to make his curing process more perfect, not to dispose of his goods to his immediate competitor, who robs him of a profit to which he is entitled, but to offer his goods to the legitimate dealer under his own brand and to wage his war upon these lines to the end. The merit of his product will command just recognition in the end, and the American hog, so long unjustly discriminated against, will push his way into the front rank of his various competitors upon this side of the ocean." (CONSULAR REPORTS No. 122, p. 442.)

It will be noticed that no names were given in Consul Reid's former report; consequently, all names are omitted in the present report.

papers. Referring to this matter, I find an item in the Telegraph of May 4, which is made a part of inclosure 2, the closing sentence of which is suggestive.

From this statement of facts the Department will see that my original statement was not a careless one, but was made deliberately after due investigation. I believed it to be correct and that it could be substantiated even as against particular firms. Moreover, I still believe it to be correct in substance, although it might be difficult to secure absolute proof for reasons above stated. At all events, it would seem that where there is so much smoke there is likely to be some fire.

I submit to the Department the question as to whether it would be advisable to publish in the CONSULAR REPORTS the statement of the Limerick firms herein inclosed and above referred to. I simply offer the denial for publication, in accordance with my statement to one of the firms.

I may say in conclusion that it was not my intention to do injustice to anyone, but it was my very decided purpose to ventilate what I believed to be a fact in the interest of an important American industry, and in the preparation of my report I am conscious of having exercised more than ordinary care.*

ALEX. J. REID,
Consul.

UNITED STATES CONSULATE,
Dublin, May 12, 1891.

DENIALS OF LIMERICK FIRMS.

[Inclosure 1 in Consul Reid's report.]

LIMERICK, *April 29, 1891.*

ALEXANDER J. REID, Esq.,
United States Consul.

SIR: We are in receipt of your favor of the 18th instant addressed to Messrs. ———, and we now jointly beg to confirm denial contained in Messrs. ———'s letter to you under date

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* *Chicago-Limerick bacon.*—In the early part of 1881, under the authority of the Department of State, I visited the West for the purpose of investigating the pork question. The result of my investigation was embodied in a report published under the title of "American pork, result of an investigation made under authority of the Department of State." At that time many of the governments of Europe had issued prohibitory decrees against our pork products.

While in Chicago, I fell in with a leading packer and curer, an Irish gentleman I believe—at least he cured for Irish firms. In discussing the European phase of the question, this gentleman showed me a handbill which he had received a few days previously from a leading firm in the city of Limerick. The handbill was addressed to the English consumers of Limerick bacon, and warned them of the great danger to public health attendant upon the consumption of American bacon; warning them still further against American bacon palmed off as the pure Limerick article. The handbill wound up by assuring them that no reliance could be placed upon Limerick bacon which did not have the brand of said firm thereon.

"Now," said my informant, "nearly every pound of this firm's 'Limerick bacon' sold to the English consumers is manufactured right here in Chicago."

"Prove it!" said he, in answer to my question; "I should think I could, seeing that I myself manufacture and ship it direct duly branded as '——— Limerick bacon;' and, let me tell you, no better bacon was ever made in Limerick or sold in England."—MICHAEL SCANLAN, *Chief of Bureau of Statistics, Department of State.*

April 17, and also contained in our letter to the editor of the ———, dated April 18, copy of which we inclose.

We shall be glad if you give our denial a place in your next report, as you offer to do, so that it may have an equal circulation with the statement in your last of which we complain.

We are, etc.,

———
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———

CURING HAMS AND BACON IN IRELAND.

LIMERICK, *April* 18.

SIR: In your article under above heading on the 11th instant, being a report by United States Consul Reid, of Dublin, we have seen a statement with reference to the Limerick bacon and ham curing industry, from which the following is an extract: "I find that one of the chief pork-packing concerns in Limerick buys great quantities of American hams in the cured state, smokes them, impresses its own brand upon them, and places them upon the market at a price only a trifle below what it asks and receives for its own goods."

This statement we wish to contradict most distinctly, so far as our firms are concerned. We neither buy nor sell any goods of American origin, nor do we believe any merchant in Limerick brands hams as stated.

We are, etc.,

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———

IRISH HAMS AND BACON.

[Inclosure 2 in Consul Reid's report.—Clippings from Dublin Telegraph of May 4, 1891.]

County of City of Dublin, to wit:

I, ———, in the city of Dublin, do solemnly and sincerely swear as follows: That I am manager of the firm of ———, bacon and ham curers, of ———, and that I personally supervise and attend to said business. That the said firm of ——— have never bought, sold, or otherwise dealt in pigs, except Irish bred and grown pigs, and have never bought, sold, or otherwise dealt in bacon or hams other than those manufactured from Irish bred and grown pigs, and manufactured upon the premises of the said firm of ———; and have never bought, sold, or otherwise dealt in any kinds of meats of American or any other foreign origin; and I swear most positively that all hams and bacon exported in the name of the said firm of ——— to France, England, Scotland, or elsewhere were manufactured of Irish bred and grown pigs, and manufactured by the said firm of ——— at their establishment at ——— street aforesaid; and the said firm of ——— never exported to France, England, Scotland, or elsewhere any kind of meat of American or any other foreign origin.

Sworn to before me this 16th day of January, 1891, at Dame street, in the city of Dublin.

ISAAC BECKETT, *J. P.*

Signed, ———.

The above is copy of an oath made weekly to satisfy continental customs authorities as to the origin and manufacture of goods exported by ———, the most extensive curers and exporters in Dublin. Six prize and gold medals, 1889 and 1890.

[Editorial comment.]

The firm is determined that their buyers shall have no occasion to doubt the genuineness of their Irish hams and bacon, and are now publishing a copy of the weekly affidavit which they make for export purposes. If all firms were prepared to give a similar guaranty, the trade would be in a sounder state.

MINES OF SAN NICOLAS, TAMAULIPAS.

REPORT BY CONSUL RICHARDSON, OF MATAMOROS.

I have the honor to transmit herewith a translation of an article which appeared in the Official Gazette, published in Victoria, Tamaulipas, February 14, concerning the mines in the San Nicolas district. This article and translation were furnished me by Hon. Thomas Carson, mayor of Brownsville, who personally vouches for the accuracy of the statements made therein.

I am in receipt of Department circulars calling for information upon the mining laws and mineral resources of this consular district, with which I shall comply as soon as I have all the data at hand. I have thought it best, however, to make this statement directly to the Department, since it seems to me necessary to the full history of this consular district.

Since the transmission of my report upon "Conditions affecting trade in Mexico," a great interest has been awakened in the subject of mining by reports of rich findings in the old San Nicolas mines, which will probably result in an overhauling of all the old mines and the discovery of many new ones in the mining regions of Tamaulipas.

The San Nicolas mines are situated in a chain of hills in the Sierra Madre range, near the town of San Nicolas, about 180 miles southwest of Matamoros, and lying between the two railroads projected from Matamoros to Linares and Victoria, respectively, known as the Matamoros, Linares, and Matchuala and the Matamoros, Victoria, and San Luis Potosi railways.

These roads, according to preliminary surveys, will run within about 40 miles of these mines, while they are about the same distance from the Monterey and Mexican Gulf Railway.

This town and these mines are not new. Says Governor Alijandro Prieto, in his valuable history of Tamaulipas, published in 1873:

> San Nicolas was erected into a town in 1767. The mines in that division were long worked by the Spaniards, but since they abandoned the country this mining district has fallen away from a population of 16,000 to 300 inhabitants. The ore is abundant in the old mines. * * * They were suspended in 1810, and have never been resumed on account of the unfortunate revolutionary condition of the country imperiling the administration of public justice.

At the time referred to by Governor Prieto, when these mines suspended work, there was, according to Humboldt, who visited Mexico in the years 1804–'5, over 3,000 mines in Mexico producing gold and silver. At the close of the struggle for independence fully one-half were abandoned, a large portion of which have never been reworked, though the Mexicans are good miners. There was an apparent revival in the mining industry in the years 1824–'26, at which time there was an epidemic of swindling mining companies organized in Great Britain for the purpose of "working" Englishmen as well as the mines of Mexico. These companies naturally fell to pieces,

and the influence of their failure was such, together with the prolonged state of political upheavals and commercial paralysis, as to defer any further especial outlay of capital in the country until within the past two decades.

The range of hills in which the San Nicolas mines are found has long been known to be rich in argentiferous galena. There are one hundred or more known mines, all of which were producing ores in paying quantities up to 1810, when the Spaniards were forced to leave the country. The great hindrance to work of mining here, as in most mining districts, is the lack of water and fuel in the immediate vicinity. There is said to be an abundance of both within 25 or 30 miles of these mines over a good road.

These mines were formerly considered very rich. Most remarkable traditions concerning them are quoted, such as the cutting of silver bullets from the ore and the paving of the streets of San Nicolas on festal occasions with silver, and yet, according to the best data at hand, the best producing mine was the Dolores, which netted 330 ounces to the ton. It will be seen by the footnote to the inclosure transmitted herewith that the present assay of La Casoliña is said to indicate from 1,100 to 1,540 ounces to the ton. It is the belief of the engineer in charge that the mother vein has been found and that a reasonably rich output may be expected for some time to come. The Tamaulipas Company have been exploring in this region for several years. Their work has been largely experimental, and so not remunerative until within the past 4 months. They are now negotiating for improved machinery and propose to have several hundred men at work soon.

These recent developments at San Nicolas are the "signs of promise" for Tamaulipas. It has long been believed that this State was rich in minerals, and under the impetus of this encouraging report the hills are rapidly filling with prospectors. The motive for completing some of the many projected railroads through the State is enhanced, and with the completion of these roads there would be a marked revival in agriculture and trade. This is unquestionably the agricultural State of Mexico. As rich as it may be in minerals, its greatest wealth is in its soil, and the key to both industries is markets near at hand.

JOHN B. RICHARDSON,
Consul.

UNITED STATES CONSULATE,
Matamoros, March 24, 1891.

MINING PROGRESS IN TAMAULIPAS.

[Inclosure in Consul Richardson's report.—From Periodico Oficial del Estado de Tamaulipas.—Translation.]

Not without reason has the governor persisted in affirming that mining in the State will be one of the principal branches that will advance it. What has been done already demonstrates it. The mines of San Nicolas, that were so long abandoned, have met a complete change, owing to the impulse of the Tamaulipas Company and to the knowledge of the engineer, Mr. Fernando Sustersic, whose works have been perfectly laid out and ably executed.

CONDITION OF THE MINES.

San Nicolas.—The adit runs horizontally 110 metres, and will require to finish the work 207 metres of excavating and walling up, with the exception of the "Labor del Agua," which has been worked a distance of 100 metres over metal of the value of $106 per ton of 2,000 pounds, having a reserve of 2,000 tons. This adit will be finished by July of the present year. Before its termination three very rich veins will be met, according to tradition. It is the intention of the company to continue the adit 80 metres more, until it crosses or cuts the vein of Las Hornugas. It is said that the products of this vein were given for the foundation of the famous Hacienda de la Gavia.

La Carolefia.—An adit 50 metres long has been constructed, which was made to locate the various veins contained in its interior, and which have been found. Through means of this adit the mother vein, that had been lost for time immemorial, was found. The mother vein was followed through passages from east to west for a distance of 25 metres, where was found, on the east side, a quantity of very rich metal, the shaft of which has a depth of 42 metres, all over metal; the vein continues improving, not only in quantity, but in quality.

The assay of the metals of this new vein is, near the surface, from 40 to 50 ounces per ton, and at greater depth it is from 100 to 400 ounces per ton. At a depth of 18 metres below the level of the shaft or pit openings have been made over the vein, from east to west, that now have 10 metres in each direction, rich metal being found all the distance. Besides this vein, there are five smaller veins or branches with much metal, although the assay of these branches is poorer. Nevertheless, the price paid for it at the foundry or smelter of Monterey is $80 per ton.*

Dolores.—This mine has a shaft worked 7 metres and 50 centimetres, and produces $150 per ton.†

Aguilares.—This mine has a shaft worked 10 metres, and produces $100 per ton.

Colorada and La Mexicana.—These mines are not being worked in a formal manner. All of these mines belong to the Tamaulipas Company and are under the direction of the engineer, Mr. Sustersic. There are actually employed 100 workmen, and the company has purchased sufficient land for the construction of houses, with the object of bringing 200 or 300 families of miners from Guanajuato and Zacatecas. Soon there will be a branch of the Gulf Railroad that will go direct to the mines in question.

AMERICAN-CHILEAN TRADE.

REPORT BY CONSUL McCREERY, OF VALPARAISO.

Since my arrival in this country, in June last year, I have devoted a very considerable portion of my time to the study of the commercial relations existing between the United States and Chile. It is not always easy to obtain the desired information, importers very naturally not caring to furnish statistics or to divulge matters connected with their business. Therefore, a large portion of this report will be founded upon my own deductions; but, as they are the result of patient and careful inquiry, they may be accepted as perfectly reliable in all their parts.

I believe the United States has in Chile a valuable market for many of its productions, but before going any further I should like to correct one or two erroneous impressions respecting this market which appear to have taken hold of the minds of a good many persons in our country. It is a

* The present assay of the output of La Carolefia runs from 1,100 to 1,540 ounces of silver per ton of ore.

† This mine was formerly considered the richest in the group, producing at one time 330 ounces per ton.

great mistake, for instance, to suppose that the manufactures of the United States are ignored, overlooked, or neglected in this country. There are in this city at least twenty respectable importing houses who are well acquainted with United States manufactures and fully alive to all the improvements that take place in them, and they are ever on the lookout to introduce such new articles as their practical experience suggests may be adapted to the requirements of this country. It is an error to suppose that the commercial traveler, in flying visits at long intervals of time, can accomplish more for American manufactures than long-established firms who are thoroughly acquainted with the country and its requirements. Therefore, if our manufacturers would place themselves in communication with these long-established firms or with their recognized agents in the United States, the possibilities in favor of an extension of their trade with this country would be vastly superior to what they are and to what they will be so long as they confine their representation to the professional drummer. A few words in explanation and illustration of my contention. I make no pretension whatever of condemning the employment of the commercial traveler altogether. By no means. But there are travelers and travelers. It is, in fact, a position that requires, among many other requisites, the very important one of great tact. Now, I contend that this important requisite is not displayed by the traveler who, for instance, endeavors, before visiting the wholesale and importing houses, to do business with retail dealers. Yet this, I am assured, is no uncommon occurrence, the result being, quite naturally, that the wholesale houses resent this interference with their retail customers by refusing to enter into business transactions with the offending traveler, and consequently he books a few insignificant orders, and the Chilean market is declared by his employers to be an unprofitable one, all through a want of tact, and is not tried again. I am also assured that in the majority of cases the business secured from retail dealers has been the reverse of satisfactory, disputes having arisen with respect to size, quality, and appearance of goods—these too often being sold from showy and exaggerated lithographic presentments—and the mode of payment. Therefore, it would appear that the wisest and safest plan for travelers to follow is to endeavor to introduce their goods through the recognized wholesale distributors of merchandise and to leave the small fry alone.

There is another matter to which I desire to call the attention of our manufacturers, which is that they neglect to bring their specialties to the notice of this country by judicious advertising. If our manufacturers imagine—as they probably do—that by advertising in certain publications which are said to be specially designed for circulation in South America they have done all that is necessary to bring their manufactures to the notice of the inhabitants of this continent, they are grievously mistaken. I can speak for this country that the publications in question are rarely seen here, and, when seen, are rarely looked at, and I have no hesitation in affirming that judicious advertising in long-established Chilean papers, which are universally read, would produce greater results in a few months than years of advertising in the publications referred to.

In this connection, there is another matter to which it is advisable that I should call the attention of our manufacturers. Undoubtedly, there is in Chile a large field for products of the United States; but it is not an unlimited one, nor is it suitable for all the manufactures of our country. For instance, Chile, unlike Perú, does not produce sugar, rice, or cotton; consequently, there is no market here for machinery applicable to the raising and treating of those articles. I mention this because I notice that considerable confusion exists in the minds not only of our manufacturers, but also in those of many persons who profess to write for their information, respecting Chile and South American countries generally. As a general rule, our manufacturers may depend upon it that the safest and wisest plan they can adopt, when they feel a desire to try this market, is to place themselves in communication with a respectable firm doing business here. By so doing I feel assured that they will save time and money, and, possibly, be spared considerable annoyance and perhaps loss.

There is, I think, an excellent prospect for a line of steamers between New York and Callao, via the Straits of Magellan, calling at Rio de Janeiro, Montevideo, Buenos Ayres, Valparaiso, and other intermediate ports. At present the carrying trade between New York and Boston and this coast is done in sailing vessels via Cape Horn. The average voyage to this port is probably about 3 months, and this time, added to the time the vessel is occupied in loading in New York or Boston, a month for the transmission of the order and another month for its execution, makes at least 6 months, under the most favorable circumstances, before an order is received here. By the steamer route indicated (via the Straits of Magellan) this time could be reduced by at least 2 months, and, in many instances, by 3 months. I think a monthly line would be sufficient for the requirements of this coast and to commence with steamers of from 2,000 to 2,500 tons carrying capacity. With respect to return freight, Chile could give nitrate, guano, manganese, wool, etc. If such a line were established, I feel convinced that it would facilitate and increase the commercial relations of the United States and Chile.

With respect to our trade with this country, I find it stated in official statistics that there was an increase in imports from the United States in 1889 of 22.62 per cent. In the 5 years 1885–'89 the value of the imports and exports was as follows:

Year.	Imports.	Exports.
1885	$2,721,265	$1,626,773
1886	2,623,172	2,649,806
1887	3,248,314	2,611,384
1888	3,133,173	2,070,694
1889	3,842,078	3,781,411

The total value of the imports from the United States in 46 years (1844–'89) is given at $91,674,630. The value of the exports to the United States in the same period is given at $86,474,262.

In 1889 45 American sailing vessels of 39,708 tons entered Chilean ports from foreign ports, 2 only being in ballast. The departures for foreign ports were 30 vessels of 26,864 tons, 1 only being in ballast. One steamer of 88 tons entered and 2 of 288 tons left.

The coasting returns give 61 sailing vessels of 34,215 tons entered and 72 vessels of 46,473 tons cleared; no steamers were employed.

The principal imports from the United States in 1889 were as follows:

Articles.	Value.	Articles.	Value.
Oil:		Grease	$10,245
Lamp and machine—		Tools:	
Vegetable	$38,993	Agricultural	14,616
Mineral	595,900	Carpenters'	17,632
Sewing machine	2,220	Soap	4,898
Cod liver	464	Cottons:	
Florida water	7,635	Twilled	111,032
Vitriol	459	Plain	17,962
Mineral water	397	Trouserings	11,932
Turpentine	24,140	Bagging	107,682
Wire	7,600	Sheeting	41,240
Tar	3,410	Books:	
Bitters	4,324	Printed	14,420
Plows	39,522	Account	3,358
Harnesses	1,925	Canvas	4,615
Rice	1,109	Cabinet woods	26,551
Refined sugar	57,535	Pine and other lumber	998,831
Scales	5,400	Lard	32,470
Wooden buckets	3,406	Railway material	259,077
Copal varnish	3,787	Agricultural machinery	30,452
Trunks	2,430	Sewing machines	10,091
Blacking	1,819	Machinery	31,610
Pumps	3,037	Hardware	94,000
Pitch	2,124	Furniture	5,618
Wheelbarrows	3,509	Wicks	4,308
Coaches	7,805	Iron shovels	9,955
Ball cartridges	5,373	Sandpaper	2,324
Nails:		Wall paper	4,000
Wire	3,139	Perfumery	3,279
Cut	62,879	Revolvers	7,622
Stoves	15,139	Mining powder	11,767
Fireworks	4,939	Resin	33,576
Glassware	4,089	Platform scales	11,649
Dynamite	6,455	Sacks	10,854
Coopers' staves	150,000	Chairs	48,089
Shoe pegs	8,625	Tacks	3,427
Flannel	169,706		

The principal exports to the United States in 1889 were as follows:

Articles.	Value.	Articles.	Value.
Quillaia bark	$480.00	Walnuts	$8,039.64
Goat skins	2,946.65	Nitrate of soda	2,990,256.00
Beans	11,996.00	Hemp seed	1,512.55
Sheeps' wool	224,297.00	Iodine	482,800.00

The statistics for 1890 have not been published yet, but, as far as the United States is concerned, I believe imports and exports last year will compare favorably with 1889.

I have no doubt that Chile would take a large quantity of our products if we, in return, could take a large quantity of her productions. The United States can not, of course, take any of Chile's wheat or copper or silver; consequently, our imports from her must, of necessity, be confined to nitrate, iodine, guano, manganese, and a little wool. In my opinion, it is to the first of these that we must look for an impetus to our trade with Chile. If our farmers were acquainted with the extraordinary fertilizing properties of nitrate, and especially for beet culture, I feel sure that they would become large consumers of this substance. Now that the manufacture of sugar from beets appears to have passed the experimental stage, no time should be lost in bringing nitrate to the attention of the growers of this root. In 10 months (January to October) of last year the exportation of nitrate amounted to 681,241 metric tons, and by far the greater portion of this large quantity went to Germany to be applied as a fertilizer to beets.

As I have already stated there is a good market in Chile for a large number of American manufactures, and, though not unlimited, it is capable of considerable expansion.

In conclusion, I beg to remind manufacturers and others that patent rights can be obtained in this country, and that protection can also be obtained for trade-marks.

WM. B. McCREERY,
Consul.

UNITED STATES CONSULATE,
Valparaiso, March 2, 1891.

THE SANITARY SYSTEM OF BERLIN.

TRANSLATION BY CONSULAR CLERK GEORGE H. MURPHY.

"The healthfulness of a city," says a French authority on the subject, "depends upon two things: the water which it drinks and the rapidity with which its impurities are removed."

While, beyond doubt, these are the two principal causes of salubrity or its opposite, there are, however, other causes which contribute to these results.

Market houses must supply good articles of food. The freshness of such articles must be required. To obtain these conditions, police supervision has been found necessary.

The slaughter-house must be strictly watched, and private slaughter-houses removed from the city.

By careful official inspection of meat the inhabitants must be protected from the danger of being supplied with unhealthy beef, etc.

These communal duties were impossible of fulfillment until the laws of the State empowered the communities to permit slaughter only in public slaughter-houses and to insist upon scientific inspection of meat before allowing it to be placed upon the market for sale.

Since the passage of such laws by the Prussian legislature in the years 1868 and 1881, the opinion has grown among scientists and the general public that it is the duty of municipal authorities to exert themselves for the prevention of general dangers which can affect the

health of individuals through the crowding together and commercial intercourse of human beings, and especially through the obtaining of food in this intercourse.

In addition to these Prussian laws, there has also been imperial legislation on the subject in the form of the so-called articles-of-food law, which has the double object of prohibiting the sale of injurious articles of food and of protecting the public against deceptions not injurious to health in the purchase of such articles.

Furthermore, during the period under report several police regulations bearing on this subject were issued. Among these were the order of July 6, 1887, in regard to the trade in fresh cow milk, the order of April 9, 1888, in regard to the manufacture of mineral water, and the order of January 20, 1883, in regard to the erection and use of beer-pump apparatus.

If, however, laws, regulations, and public instructions have done what they could to lessen the dangers arising from the use of unhealthy food, little has been accomplished towards removing those dangers which arise from the manner in which laboring classes exist in large cities. While much remains to be done towards improving the dwellings of the laboring portions of the population, the communal authorities have at least afforded to all classes of the population the opportunity to breathe in streets, squares, and before the gates the healthy air which rises from plant vegetation. Care, moreover, is taken that children of this class are not confined in unhealthy schoolrooms or bent on unsuitable seats; that they have open playgrounds and gymnastic apparatus to develop their strength and vitality. In public parks similar provision is also made for the children. In short, in addition to its distinctive purpose, nearly every branch of the municipal administration contributes to the advancement of public healthfulness.

PUBLIC BATH HOUSES.

As cleanliness is a prerequisite to healthfulness, it may be well first to consider the convenience offered for bathing in the public bath houses.

In the municipal report for the years 1877–'81, after comparing the bathing facilities of Berlin with those of other great cities of ancient and modern times, it was said:

"We do not need to imitate the luxury of the hot baths of Titus and Caracalla, but we can not expect our lamentably bad public facilities—at present we offer only river baths to the public—to suffice much longer."

The public has now within its reach, at very moderate prices, tub and shower baths in the so-called Volksbäder (people's baths), which are partially supported by the commune.

As long ago as 1873, in consequence of the increasing interest in sanitary matters and the rising value of land in Berlin, a Volksbäder society was established, and in the same year the first Volksbadeanstalt (people's bath house) was opened at 13 Höchste street. A new impulse was given to this movement by the erection, at the Hygienic Exposition in 1883, of a bath house by Dr. Lassar, of Berlin, which, in a comparatively small space and with moderate building and current expenses, guarantied absolutely clean and fresh baths. This was made possible by the use of shower baths alone. This form of bath was not new, as it had long been in use in connection with tub and basin baths; but the unquestionable service done by Dr. Lassar was that he exhibited before the eyes of the public, as a distinct and independent form of bath, the shower bath, whose high sanitary value, as compared with other baths, had often before been recognized by great medicinal authorities. The problem how to establish bath houses offering most abundant accommodations, and thereby enabled to pay expenses from their own receipts, thus seemed solved.

The Volksbäder Society, however, held firm to the opinion that no Volksbadeanstalt could entirely dispense with tub baths; still it placed on its programme Dr. Lassar's shower baths also.

After much preliminary negotiating, on December 24, 1886, the city council agreed to allow the society to build two bath houses on municipal park property, and, in addition to this, gave in cash 108,000 marks towards the building cost, with the understanding that these bath houses were to be the property of the society, built and conducted by it. The city, however,

retained the proprietorship of the land and the right to purchase the bath houses at prices agreed upon, to oversee all business details, and to assist in fixing the tariff of prices. At a meeting of the city council this plan was vehemently attacked by some members, on the ground that such important establishments should be directly under the control of the city and run at its expense. It was argued on the other side that this was only an experiment, and that if the city took it into its own hands this would require the appointment of new officials; that the society had already in its employ experienced men; that leaving this matter to the voluntary efforts of the public encouraged a general interest in sanitary affairs; and that by this arrangement 80,000 marks were saved to the municipality, the amount which the society offered to contribute to the building expenses. Moreover, the society gave every guaranty that the business would be properly conducted, and even left the municipality the right to acquire the full rights to the property at any time. It was finally agreed to consider these two bath houses as the beginning of a system and to confine the agreement between the magistracy and the society to these two bath houses, leaving the extension of the system entirely in the hands of the magistracy. These two bath houses were completed in 1887 and put into operation in the spring of 1888.

For the use of those who can afford to pay more there are tub and shower baths of the first class, which are more luxuriously equipped. The price for a tub bath is fixed at 50 pfennigs (12 cents), while the shower bath costs only 25 pfennigs (6 cents). The greater part of the space is, however, given up to second-class baths, which, in spite of their cheapness—the prices are 25 pfennigs (6 cents) and 10 pfennigs (2½ cents), respectively, for tub and shower baths, inclusive of the use of soap and clean towels—are equipped with all the requisites to a healthful bath.

In the first business year, beginning March 12, 1888, the results were as follows:

Volksbade Oranienburger Vorstadt.—The total number of bathers was 84,105, of whom 62,296 were males and 21,809 females. Of the males, 43,324 took tub baths and 18,972 shower baths; of the females, 19,776 took tub baths and 2,033 shower baths.

Volksbad Alt- und Neu-Kölln.—The total number of bathers was 91,967, of whom 67,536 were males and 24,431 females. Of the males, 43,443 took tub baths, 23,909 shower baths, and 184 salt baths; of the females, 22,319 took tub baths, 1,932 shower baths, and 180 salt baths.

The fact that, in spite of their cheaper price, the shower baths were not more largely taken is, no doubt, due chiefly to their not being so well understood by the public. This seems more probable as the shower-bath establishment erected at the central slaughter-house for the use of butchers enjoys great popularity.

The business results were also satisfactory for the first year; the receipts not only covered expenses, but paid a small interest on the capital invested. The municipal authorities are therefore disposed to extend the system under its own management. It is next intended to build two such bath houses, one in the eastern part of the city and one in Moabit.

The extension of the municipal activity in this direction did not, in the period under report, prevent increased attention to river baths. The first of these baths was built for males in 1850; the first for females was built in 1863. At the close of 1884 there were eight such bath houses in operation, five for males and three for females. The patronage of these baths since the year 1880 has increased about 20,000 per annum. In the year 1888 in these municipal establishments almost 700,000 baths were taken, and on warm days in June and July many persons had to be turned away.

On account of the great number of petitions received from individuals and societies, and especially from workingmen's clubs, the city council was obliged to regard the increase of the river bath houses as a public necessity. In 1885, therefore, it was decided to increase systematically, year by year, the number of such establishments. Since then the following improvements have been made: In 1886 the area of the bath house for males on the Nordhafen was increased to 1,412 square metres, and other extensions were made. In 1887 two bath houses with swimming basins were erected for males, each at a cost of 20,000 marks. Each

of these has a water-surface area of 242.19 square metres and have basins of 101.84 square metres. The latter are divided into two parts, for persons who can swim and those who can not. By the erection in each of seventeen closable closets accommodation is afforded to some of the visitors to unclothe and clothe themselves in private. For other visitors fifty-eight closable clothes wardrobes are provided. Furthermore, each basin has a springboard and a shower-bath room, with water supplied by the municipal waterworks.

On account of these improvements in the new bath houses their patronage became so great that it was necessary to exclude boys under 14 years of age and persons holding free bath tickets from the poor commission and to require such persons to go to the old bath houses. The price was fixed at 15 and 10 pfennigs, respectively, with or without dressing closets. Persons taking swimming lessons pay one fee of 3 marks (72 cents) to the swimming teacher. The acceptance of fees by employés is strictly forbidden. Monthly tickets can be had for 3 marks (72 cents) and season tickets for 10 marks ($2.38). The holders of such tickets are entitled to one bath daily and to the use of the shower bath and dressing closets so far as possible.

Furthermore, in 1887, but after the close of the bathing season, a new bath house with swimming basin was erected near the Schilling bridge. This bath house was intended for the alternate use of the sexes, and cost 11,000 marks. In the fall of 1888 the female bath house on the Nordhafen, owing to impurities in the water, was moved to another part of this pond.

Several other bath houses will be built so soon as the necessary consent of the river officials can be obtained.

The following table gives an idea of the business and financial results of the Berlin municipal river baths:

Year.	Number of bathers.			Number paying.	Number free.	Receipts.	Expenses.	Deficit.
	Male.	Female.	Total.					
						Marks.	*Marks.*	*Marks.*
1882	296,833	133,370	430,203	203,157	227,046	10,157.85	11,487.38	1,329.53
1883	363,013	161,589	524,602	259,212	265,390	12,960.60	19,743 95	6,783.35
1884	369,239	183,587	552,826	265,698	287,128	13,284.90	16,749.45	3,464.55
1885	395,428	200,167	595,595	285,443	310,152	14,272.15	20,437.42	6,165.27
1886	479,508	208,853	688,361	335,419	352,942	16,770.95	26,292.50	9,521.55
1887	449,466	186,650	636,116	312,789	323,327	16,656.45	26,998.47	10,342.02
1888	365,012	158,604	523,616	255,356	268,260	17,130.07	26,463.00	9,332.03

The fact shown by the above table, that in the year 1886 the number of bathers was greater than in the two following years, notwithstanding that in 1888 there were four more bath houses in operation than in 1886, was due to the summer of 1886 being exceptionally warm and favorable to the river baths. The decrease in the patronage of the river baths is also, perhaps, partially due to the increasing competition of the "Volksbadeanstalten."

Three other forms of public sanitary protection will next be discussed. They are vaccination, cattle-disease laws, and disinfection of articles which have come into contact with persons suffering from contagious diseases.

VACCINATION.

Vaccination is compulsory in Berlin.

With the increase of population the number of times and places for vaccination increased.

In the year 1882 the number of children vaccinated was 56,922; vaccinating physicians, 70; times and places fixed for the purpose, 910. In 1888 the number of children vaccinated was 74,530; vaccinating physicians, 73; times and places for the purpose, 1,069. For these public vaccinations rooms in the district schools were used.

The cash outlay incurred by the city in carrying out the vaccination laws was, in 1882, 19,986 marks, and in 1883 24,760.61 marks.

Not only in extent did vaccination increase during the period under report, but also in quality, owing to the establishment in 1887 of a royal institute for the production of calf lymph at the central slaughter-house in Berlin.

Up to the year 1887, in Berlin, as well as in the greater part of Germany, humanized vaccine, that is, vaccine obtained from human beings, was generally used. Against this practice, however, there had long been a strong movement, both in lay and in medical circles, and in favor of a return to the original system, advocated by the discoverer, Dr. Jenner. In Italy, Holland, Belgium, Switzerland, and also in some cities of Germany, there had long been institutes devoted to the production of animal lymph. In 1865 Dr. Pissin had established such an institute and had found many takers for his lymph.

The city officials first discussed this subject in 1869. A petition from the local medical-ætiological society asked that "the vaccine institute of Dr. Pissin be assisted by an annual appropriation from the State Government until the system of vaccinating from arm to arm has been definitely reformed, so that in this way the poorer classes of the population may also enjoy the advantage arising from the use of vaccine matter obtained direct from the cow."

This petition had great weight with the city council, as it was shown therein that by the use of humanized vaccine many diseases, such as syphilis, tuberculosis, scrofula, etc., could be conveyed from one person to another.

As, however, it was a matter for State, rather than municipal, action, nothing was done to assist Dr. Pissin in his undertaking. Likewise the State Government took no action. The general imperial compulsory vaccination law of April 8, 1874, and the Prussian law of April 12, 1875, did not indicate which sort of lymph was to be used. The public mistrust in regard to the use of human lymph constantly grew, however, and was strengthened by several unquestionable instances where diseases were thus conveyed from one person to another. In the meanwhile the animal vaccine system had been gradually gaining strength in medical circles. In 1879 the German medical congress unanimously approved of the use of animal vaccine. Thereupon Dr. Pissin addressed a communication to the magistracy, in which he recommended the establishment at the central slaughter-house of a central lymph institute for animal vaccination, from which the municipal vaccinating physicians could be supplied with lymph. Other cities had already established such institutes in connection with their slaughter-houses, especially Hamburg, Metz, and Basle. This example the city council was not indisposed to follow. A member of the council who had himself examined the institute at Basle spoke very earnestly in favor of the project. About the same time a request was made by the royal police presidency, which had received a communication from the director of the royal lymph institute, that a stall space be set aside at the central cattle market, and that the necessary material in cattle be temporarily supplied. Later on, in 1883, the police presidency inquired if the magistracy was willing to establish at the municipal slaughter-house a calf-lymph station. The city was under no obligation to do this, as, in accordance with the provisions of section 1 of the State law, the State alone was responsible for such expenses. As, however, the matter was one of such importance to its citizens, and as the magistracy had already such an institute in view, the city consented to the proposition on condition that expenses be restricted so far as possible. Inquiries were thereupon made in regard to the building and current expenses of such institutions in other cities, with favorable results.

Simultaneously with these negotiations with the royal police presidency, an agreement was made concerning the supplying of lymph thus produced for public vaccination, concerning the several rights of the contracting parties (the city and the police department, which is a State institution independent of the municipal government), and upon this basis the magistracy agreed to the establishment of a municipal lymph-producing station at the central cattle market, and a sum not to exceed 5,000 marks was appropriated for the purpose.

Before this could be carried out, however, in June, 1886, the city council received an unexpected communication from the royal police presidency, transmitting a communication from the

minister of medical affairs, stating that the State had no longer an interest in the establishment of a municipal calf-lymph station, and that it was intended to establish in Berlin a State lymph institute to supply the whole province of Brandenburg, including the city of Berlin, with animal vaccine matter. For this purpose the minister desired better accommodations at the municipal central cattle market. The police presidency was instructed to negotiate with the city council on the two following points:

(1) Would the city supply rooms for such institute in one of the existing buildings of the central cattle market, fitted up suitably for the purpose, and rent the same to the State?

(2) Would one of the municipal veterinary surgeons employed in the central cattle market supply to the director of the institute, for a recompense, the necessary assistance in the handling of the lymph animals?

This change of plan on the part of the Government was more surprising, as no reasons were given therefor. It was later ascertained, however, that it was due to certain action which had in the meanwhile been taken by the federal council in regard to the carrying out of the vaccination laws.

A commission of experts which had been appointed by the imperial chancellor in November, 1884, had reported that the objections raised to the use of human lymph were well grounded, and in recommending the use of animal lymph had advised the issuance by the federal council of strict regulations on the subject:

"The general introduction of vaccination with animal lymph should be gradually brought about, and institutes should be established in sufficient number to supply the probable demand. So soon as such an institute is in position to supply the demand upon it for animal lymph, public vaccinations with such lymph should be begun in that district."

The following agreement was reached by the city council and the royal police presidency: For the institute for the production of calf lymph are necessary: room for sixteen calves in single stalls, a room for vaccination of the calves, and a room for the physician. The city supplies for these purposes a portion of the swine hall in the central cattle market. These rooms were fitted up at the expense of the State, in accordance with plans suggested by the city and approved by the minister. These rooms were taken by the State for 5 years, beginning April 1, 1887, at the rent rate of 1,000 marks per annum. At the expiration of the 5 years either party to the contract, it was agreed, was to have the right to terminate the contract by giving 6 months' notice to the other party.

The magistracy also consented to permit one of its veterinary surgeons to exercise the functions desired by the State.

On the 26th of May Dr. Schultz, who had been appointed by the State, commenced operations, and in the same year public vaccinations with the animal lymph thus obtained were begun in Berlin.

MUNICIPAL DISINFECTION STATIONS.

That the disinfection or destruction of articles capable of transmitting contagious diseases is of the greatest importance has long been recognized by statesmen as well as by scientists. By Prussian cabinet order of August 8, 1835, regulations were prescribed for the annihilation or disinfection, under severe penalties, of articles which had come in contact with a person suffering with either one of twelve diseases mentioned in these regulations.

These regulations did not result entirely satisfactorily, as the disinfectants therein were not of the most effective sort. The experiments of Robert Koch a few years ago led to the adoption of a sure and reliable disinfectant. He proved that rushing steam of a temperature of at least 100° C. in the shortest possible period of time was able to destroy the most obstinate microörganism. In accordance with this principle, the system of disinfection was changed in the Municipal Moabite Hospital when, in the year 1884, the outbreak of cholera in France compelled the adoption of energetic precautionary measures in Germany.

Both the city council and the police presidency soon recognized the desirability of opening to the public an institution of this sort, and accordingly one was erected on Reichenberg street

at a cost of 111,447 marks, which was opened November 1, 1886. This building was so erected as to prevent the possibility of reinfection of disinfected articles by contact with articles not yet disinfected.

In wagons specially constructed for the purpose, the property of the city, articles destined for disinfection are brought from dwelling houses, packed in linen cloths or sacks, to the disinfection house. Here, in the department for infected articles, they are placed in the disinfection apparatus, which is supplied with wagons which can be drawn in and out. When the apparatus is filled, its doors are closed, and disinfection of the objects within is secured by exposing them for half an hour to the influence of rushing steam at a temperature of 110° C.

At the expiration of this time the articles are taken out on the other side in the department for disinfected articles and returned to their owners in wagons provided especially for the purpose.

The following table shows the business done by this institution:

Period.	No. of objects disinfected.	Number of persons owning disinfected objects.			Classes of persons owning disinfected objects resident in Berlin.			
		Total.	Resident outside of Berlin.	Resident within Berlin.	Of the rich classes.		Of the working classes.	
					Number.	*Per cent.*	*Number.*	*Per cent.*
November 1, 1886, to March 31, 1887.	26,400	860	29	831	803	96.6	28	3.4
April 1, 1887, to March 31, 1888.....	60,197	2,728	71	2,657	2,477	93.2	180	6.8
April 1, 1888, to March 31, 1889.....	85,536	4,098	81	4,017	3,319	82.6	698	17.4

By police order of February 7, 1887, disinfection is obligatory with certain diseases (diphtheria, cholera, smallpox, spotted and relapse typhus) and can be made obligatory with certain others by special proclamation (typhus of the bowels, scarlet fever, epidemic diarrhea, measles, whooping cough, and pulmonary consumption).

The fee collected is 4 marks per cubic metre. For poor persons disinfection is free upon the requisition of a physician. The financial report of this institution is as follows:

Period.	Expenses.	Total receipts.	Receipts from fees.	Reductions.
	Marks.	*Marks.*	*Marks.*	*Marks.*
November 1, 1886, to March 31, 1887.....	13,841.31	6,263.40	6,228.70	.....
April 1, 1887, to March 31, 1888.....	29,841.42	13,928.80	13,928.80	1,321.60
April 1, 1888, to March 31, 1889.....	35,889.50	15,910.45	15,794.61	813.20

NOTE.—The reductions are largely in connection with disinfection of municipal effects.

In addition to this disinfection station a second one has been erected on the Prenslauer Allee, which has four disinfection apparatuses.

CATTLE-DISEASE LAWS.

During the period under report there was no change in the provisions of the law whereby communal authorities are required to pay damages for horses killed on account of their having glanders and for cattle likewise slaughtered on account of lung disease, such communal authorities being authorized to cover their expenses thus incurred by levying therefor on the owners of horses and cattle within their communal districts.

During this period no cattle were killed on account of lung disease, and therefore there is no column in the following table to show an outlay for this purpose:

Year.	Number of horses with glanders killed.	Amount of damages paid for horses so killed.	Current expenses.	Total outlay.	Animals subject to levy for their quota of this outlay.		Tax levied per horse.
					Horses.	Cattle.	
		Marks.	*Marks.*	*Marks.*	*Number.*	*Number.*	*Marks.*
1882	23	5,210.00	2,612.81	7,822.81	26,197	2,347	0.30
1883	22	6,406.25	2,594.68	9,000.93	27,052	2,577	.30
1884	10	1,713.75	2,677.41	4,391.16	27,715	2,964	.20
1885	6	1,805.00	2,528.11	4,333.11	29,384	3,273	.15
1886	33	7,545.00	2,678.75	10,223.75	31,655	3,542	.30
1887	25	7,926.25	2,797.95	10,724.20	34,464	3,790	.30
1888	21	10,257.50	2,515.84	12,773.34	35,130	4,290	.40

SOLDERING GLASS AND PORCELAIN.

REPORT BY CONSUL HAWES, OF REICHENBERG.

I have the honor to call attention to a new process for soldering glass and porcelain to metals, which is exciting much interest here.

The invention is that of a Frenchman named Cailletet, but, as it is possible that the discovery has not yet been reported from France, and it seems to me such an important one to mechanics, physicists, and chemists, I venture to give a brief account of the process, which is extremely simple.

The part of a glass tube to be soldered receives first a thin layer of platinum by applying to the slightly warmed glass by means of a brush a quantity of neutral chloride of platinum and etherized oil of camomile. The oil evaporates slowly. As soon as the white, strong-smelling vapor has entirely disappeared, the temperature is raised to a red heat, and the platinum is thus reduced and coats the glass with a thin layer of metal. The plated glass is then put in a bath of sulphate of copper and the coating connected with the negative pole of a sufficiently strong battery, when a ring of copper is deposited so thick and strong upon the platinum that it can be worked in any way, and the glass tube can be treated as if it were metal as far as soldering is concerned.

It may be united to iron, copper, bronze, platinum, or any metal which will take solder.

The durability and strength when so soldered is remarkable. Mr. Cailletet has proven that in one of his apparatuses for liquefying gases the upper end of a tube so soldered withstood a pressure of more than 200 atmospheres without breaking in the least.

JNO. B. HAWES,
Consul.

UNITED STATES CONSULATE,
Reichenburg, March 24, 1891.

TRADE OF MATAMOROS.

REPORT BY CONSUL RICHARDSON.

EXPORTS TO THE UNITED STATES.

I have the honor to transmit herewith the digest of invoice for the quarter ended March 31, 1891, for the consular district of Matamoros. This digest includes the agency at Mier, there being at present no agents at Victoria and Camargo.

In the transmission of this digest it seems to me proper to make brief comment upon some matters of interest during the quarter.

The past winter has undoubtedly been the most depressing, from every point of view, of any season for the past 30 years. Business has been at a standstill. This has been due, in part, to the prolonged drought, which has for 3 years cut off all crops and necessitated the purchase of those things that have heretofore been a source of revenue; in part to the practical workings of the new tariff law, which has shut off the traffic in live stock; and in part to the gradual transference of business done at this place to other centers that have better railway and harbor facilities. I have, in recent communications to the Department, intimated my belief that the business here had touched bottom. It will not, it can not, go lower. Notwithstanding the depressing conditions which I have enumerated, a better showing is made than at the end of the last quarter. The exports for the first quarter of 1890 show only $36,795.81, of which $8,950 were in live stock, against $37,734.99 for the quarter ended March 31, 1891. Deducting the live-stock exports, the quarter just ended makes a better showing by $9,889.18, an increase of 26 per cent. Indeed, the trade has been better than in the two previous quarters. Deducting the live-stock export from the returns for March 31, 1890, it will be noted that there has been a falling off of about 37 per cent. since last year. This decrease is due, without question, to the fact that there has been nothing to sell but hides, hair, and bones. It is the measure of drought influence in trade. The yearly decrease noted is due to the fact that the railroad towns of the interior and Laredo have afforded better facilities for shipment than Matamoros. But we now rest on "hard pan." From this on trade will hold its own with steady increase. An unusually large acreage of corn and cotton has been planted, while there is no falling off in cane. There has been rain enough to start the crops well, though not enough to insure a harvest.

RAILROADS AND MINES.

There are some signs of promise. The grading is going forward slowly on the Corpus Christi and South American Railway, and with some fear and trembling we are beginning to believe that in a few months' time there will be easy communication with the north. The work of track-laying will be commenced soon. The Matamoros, Victoria, and San Luis Potosi road,

known as the Cuellar concession, is feeling its way along with equal moderation toward Victoria. Ties are now being delivered and steel rails are en route from Belgium.

The recent renewed interest in mining at San Nicolas, and the fact that the president of the road has large property at San Fernando, which is comparatively valueless without access to it, and the purchase and stocking in the past year of an immense ranch covering 640 square leagues near San Fernando—all give grounds for hope that at least the Matamoros, Victoria, and San Luis Potosi Railroad will not prove a railroad decoy. The ranch referred to is owned by capitalists in the city of Mexico. It is thought that stock can be raised and shipped into the interior with profit now, and that the present restrictions in the stock trade can not be maintained long. This company is prepared to maintain this ranch for years, if need be, without sales, and when the bars into the market of the United States are let down they propose to be on hand with their herds ready for the better prices. They also propose to engage quite extensively in agriculture. This ranch is already surveyed, and is, in part, fenced and stocked.

These are some of the present signs of better times for this part of Tamaulipas.

The completion of the two roads referred to will change all this, bringing back some of the old business and bringing in new. There is, however, as much unproductive labor as ever.

VITAL STATISTICS.

Not the least among the depressing conditions during the past winter has been the widespread sickness and great mortality, as will be seen by the following table:

Table of mortality in the city of Matamoros for the quarter ended March 31, 1891.

Description.	January.	February.	March.	Total.
Smallpox	3		1	4
Diphtheria	1			1
Typhus			1	1
Grippe			3	3
Pneumonia			29	29
Other pulmonary diseases	13	20	15	48
Over 60 years and under 3 years	13	14	12	39
All others	6	6	11	23
Total	36	40	72	148

The total number of deaths was 148, of which 72 occurred in the month of March, when nearly the entire city was prostrated with *la grippe*. The peculiarity of this epidemic has been its partiality for pneumonia. Of the 148 deaths, 80 were occasioned by pneumonia or pulmonary diseases; 6 by contagious diseases, of which 4 were of smallpox; and 39 were of people over 60 and under 3 years of age.

The proportion of old people and children is larger than usual. The deaths from smallpox are few since it has been epidemic here, as almost everywhere in the southwest. The suggestive figures are those indicating mortality from pulmonary diseases. Of all these deaths there is scarcely a single one that can be traced properly to climatic conditions. The poor people of this city have been starving, many having only the daily ration of a spoonful of frejoles and one tortilla. The suffering has been great, and there are no organized agencies for relief. The houses of most of them are not as comfortable as the stables and hogpens of the well-to-do farmers of the north. Their clothing is no protection. When *la grippe* swooped down on them, there was nothing to do but die. Had they been well clothed, well housed, and well fed, they would have lived.

It is my earnest wish that we may never pass through another winter like the past. The depression consequent upon the paralysis in business, the suffering of the people, and the great mortality was felt by all, but can be described by no one.

Table showing the value of declared exports from Matamoros to the United States during the quarter ended March 31, 1891, in United States gold.

Articles.	Value.	Articles.	Value.
Hides and calfskins	$17,731.46	Cotton seed	$282.50
Goat, deer, and other skins	20,817.35	Expenses	388.31
Horsehair	7,824.87	Total	48,070.09
Cattle hair	440.00	Less exports from the Mier agency	10,335.10
Bones	570.60	Actual exports	37,734.99
Duck feathers	15.00		

Table showing the value of declared exports from Matamoros to the United States from 1887 to 1891.

Quarter ended—	Live stock.	Other than live stock.	Total.
March 31, 1891		$37,734.99	$37,734.99
December 31, 1890	$8,950.00	27,845.81	36,795.81
September 30, 1890	21,435.20	20,206.45	41,641.65
June 30, 1890	66,346.95	41,442.83	107,789.78
March 31, 1890	24,962.00	58,829.02	83,791.02
March 31, 1889	54,369.50	50,784.95	105,154.45
March 31, 1888	42,367.50	62,068.78	104,436.28
March 31, 1887	47,490.00	88,767.90	136,257.90

JOHN B. RICHARDSON,
Consul.

UNITED STATES CONSULATE,
Matamoros, April 4, 1891.

THE JAPAN STREAM.

REPORT BY CONSUL SMITHERS, OF OSAKA AND HIOGO.

I have the honor to transmit herewith an interesting letter on the Kuro, Siwo, or Japan Stream, by John J. Mahlmann, harbor master at this port, which should be of interest to the sailing masters of the United States.

E. J. SMITHERS,
Consul.

UNITED STATES CONSULATE,
Osaka and Hiogo, May 2, 1891.

THE KURO SIWO, OR JAPAN STREAM.

[Inclosure in Consul Smithers's report.]

KOBÉ, *April 25.*

To the Editor of the Hyogo News.

DEAR SIR: The total loss of several fine steamers between Yokohama and Kobé, including the *Carnarvonshire*, *Ulysses*, and the Turkish man-of-war *Ertougroul*, having been in each case and after careful inquiry attributed to unknown currents, has probably awakened foreign shipmasters to the fact that the present charts and the China Sea directory are wanting in that completeness so very necessary towards preventing shipwreck, namely, a trustworthy and full description of currents on the southeast coast of Japan and their occasional eccentricities, and that this defect in chart and directory should be fully furnished in their next issue. With this object, and in order to lessen the danger to navigation between the ports of Yokohama and Kobé, I beg of you to kindly publish the following short summary from notes on the above stream and tides, which, being taken from observations extending over three hundred passages between the two places, I can sincerely recommend to all concerned in shipping and to the different hydrographic offices of the world.

It is generally known that the Kuro-Siwo, or Black Stream, also called the Japan Stream, arises from the equatorial current in the Pacific, which latter flows in a westerly direction until it reaches the East Indian Archipelago, where, being obstructed by land, it divides and is deflected, the southern branch flowing till it strikes the coast of Australia and there turns eastward, while the northern portion, forming the Kuro-Siwo, sweeps by the Philippines, the Loo-Choo Islands, and the south and southeast coast of Japan, continuing on its course across the North Pacific as far as the American coast. Arising from the equatorial current, this stream is essentially warmer than the ocean through which it passes, and its limits can be easily ascertained by a thermometer. The limits or width of the Kuro-Siwo, and also its velocity, are much influenced by the monsoons of the China Sea, whereas its set, or the direction in which it generally flows, is often considerably deflected by storms in the Pacific Ocean. Under ordinary conditions of the atmosphere the Kuro-Siwo, passing through Van Dieman's Strait, makes nearly in a straight line for Rock Island, touching Osima on its course. From Rock Island, after changing its set slightly eastward and touching Noshimasaki, it continues on its way across the Pacific. Steamers making the passage between Osima and Rock Island on the line joining the two places, or even outside of it, will often miss the stream entirely. This is usually the case during winter months, but in the summer it is mostly found on this line to a more or less extent, and during fine weather this line joining Osima and Rock Island may be taken as the northern limit of the Kuro-Siwo, easily distinguishable by floating seaweed, driftwood, ripples, and even by its dark color.

Inside of this line, or northern margin of the Kuro-Siwo, we have during fine weather two distinct bodies of water, the one adjoining the stream being usually without motion and the other a part of the tide belt which surrounds Japan. The body of water between this tide belt and the Japan Stream, although usually at rest, has at times been known to run counter to the Kuro-Siwo, of which I may give the following very remarkable instance: In February, 1879, the Mitsu Bishi sailing vessel *Sumanoura-maru*, Captain Spiegelthal, became dismasted some 10 miles off Omaesaki and drifted during the following 4 days, in perfectly calm weather, to within 30 miles of Osima, or at the rate of about 25 miles per day to the westward. The width of this body of water varies according to the direction and force of the wind, expanding during strong northerly winds and contracting whenever the winds are from the southward and eastward. In fact, during, and sometimes even before, these latter winds reach the coast, this body of water disappears entirely, for at such times the Kuro-Siwo is deflected from its ordinary east-northeast course and sets at a more or less angle towards the shore, merging eventually into the tidal streams and causing extraordinary high and strong tides along the coast. The weather at such times is generally thick, and it is then that captains navigating between Rock Island should be on their guard against this treacherous inset, steamers having been set shorewards as much as 16 miles in as many hours, and in place of making Osima on their starboard bow have made it several points on their port bow. The same caution holds good when steering from Osima for Rock Island, of which we have a sad but significant proof in the disaster of the French mail steamship *Nile*, which was lost some years ago on the coast of Idzu, with nearly all hands. A vessel is very seldom set in during fine weather, or, if it has occurred, there have been no evil consequences, and the incident has probably been forgotten as soon as experienced. This should not be so, but such is human nature. During thick weather, however, these shipwrecks should be borne in mind, and the cause thereof as well, and all due precaution should be taken accordingly when shaping a course along this part of the coast.

The tide belt along this coast is of varying width, extending at different times and places 5 or 6 miles off shore, while at the prominent headlands it may not extend more than half a mile; but wherever it is so narrowed it runs stronger than at other places. At Osima the flood stream seems to disappear wholly at times, owing to the Kuro-Siwo, which strikes this headland and evidently runs over the flood stream, or it may be that the tide at such times makes its way through the passage between Osima and the mainland. The flood sets to the westward along this coast, and both it and the ebb tide set somewhat into the deep bays, the former along their eastern, and the latter along their western, shores.

Again I say that captains navigating along this coast should be always on the alert for the inset before alluded to, but especially so with winds from the southward and eastward and a falling barometer. When bound from Yokohama to Kobé, after having passed Rock Island, they should take the inshore passage, weather permitting, keeping just at the margin of the tides. By so doing the inset will be avoided, and they will have the advantage of verifying their position at the last possible moment in case of being overtaken by thick weather. The difference in distance between the inshore track and a straight one is insignificant, the former approaching the great circle touching Rock Island and Osima very closely. At all events, a straight course should never be steered, and, if the inshore passage can not be taken advantage of, then the next best thing to do is to shape such a course from Rock Island as will take the vessel well within range of Matoya light. This would pass Omaesaki at a distance of 10 miles, an advantage for verifying position which should not be neglected. The bearing on which Matoya light heaves in sight would indicate at once whether the vessel had made her course or had been set shorewards, and, should the weather become thick after having passed this light, which it often does, then the distance to Osima being but short, the vessel is not likely to be set in to any great extent. A good plan is to shape a course for clearing Osima as soon as Matayo light is sighted, *i. e.*, its full range, or 16 miles.

In concluding, I may state that I disclaim any qualification for instructing the coasting captains in regard to any currents or tides along this coast, my sole object in writing being to

bring the occasional strong inset between Rock Island and Osima before the notice of captains who are strangers thereto, as also before the notice of those who have opportunities of informing them thereof, in order to prevent the frequent shipwrecks on this coast and the frightful loss of human life often attending the same; and I earnestly trust that newspapers will kindly assist me in gaining the end aimed at by freely copying the above few crude remarks. I have, however, one last word for masters of coasting vessels, which is that my offer made in January, 1879, to compile all reports on unusual currents still holds good, and that any reports sent to my office will be very gratefully received and duly published for the benefit of brother shipmasters.

I am, etc.,

JOHN J. MAHLMANN,
Harbor Master, Kobé.

TWENTY YEARS OF GERMAN TRADE.

REPORT BY CONSUL-GENERAL MASON, OF FRANKFORT.

It will be remembered that the first general tariff law affecting the whole of Germany, which was adopted on the 1st of October, 1870, and amended by the act of July, 1873, was a distinctly revenue tariff, without any declared purpose of protection. It continued in force until the 1st of January, 1880, when it was superseded by the protective tariff law which had been enacted on the 15th of July previous. From 1870, therefore, down to the close of 1889 united Germany had enjoyed 10 years' experience under a tariff for revenue, and likewise 10 years under a protective system, which was not only radical and far reaching in its original form, but has been twice amended: first, by the act of May 22, 1885, which advanced duties on several important classes of imports, and again by the act of December 21, 1887, which increased the tariff on cereals and distilled liquors. Moreover, American pork products, which were imported in vast quantities during the period from 1870 to 1880, have been practically excluded by imperial edict since 1881.

With these conditions in mind, it will be interesting to compare the values of exports and imports during 1880, the first year under the protective system, with those of 1889 (the statistics for 1890 not being yet available), by which time the whole industrial and commercial machinery of Germany had become thoroughly adapted to the new policy.

The aggregate value of German exports and imports for the 2 years specified was as follows:

	Marks.
1880	5,806,108,000
1889	7,343,481,000
Increase	1,537,373,000

This increase is equal to 26.4 per cent.

The increase of imports exceeds that of exports in the following ratio:

Description.	1880.	1889.	Increase.
	Marks.	*Marks.*	*Per cent.*
Imports	2,859,928,000	4,087,060,000	42.9
Exports	2,946,180,000	3,256,421,000	10.5

This marked disparity between the increase of imports and exports may have, at first glance, a more sinister appearance than will be justified by a further and more complete study of the situation. The past decade has been, for Germany, a period of extraordinary development and activity. The population of the Empire has rapidly increased, notwithstanding constant and important losses through emigration. The food-producing capacity of the country had been nearly or quite fully developed in 1879, so that the subsequent increase of population required a proportionally increased import of food products.

The manufactures of Germany have broadened and developed more rapidly within the past 10 years than during any previous decade. But Germany is, like Switzerland, poor in natural supplies of raw materials. Her mines, forests, and fields have reached their full productive capacity; there are no new mineral treasures to be discovered and developed, so that the expansion of industry necessarily entails a corresponding increased import of raw materials. The fact that a proportionate share of the products of this vastly increased manufacture has not been exported is due to a variety of causes, more or less temporary, a few of which may, for the present purpose, be briefly cited. Prior to the unification of the German Empire in 1870 the people of the several states had been largely devoted to agriculture. Few large fortunes existed outside of the royal and noble families; wealth was more equally distributed among the people than in most European countries; wages were low, and the people as a whole were, in comparison with those of France or England, in moderate financial circumstances. All the conditions of life, more or less, were limited; habits were frugal, houses simply furnished, and luxuries practically unknown to a large majority of the population. The 10 years just past have witnessed an important change in all these respects. With the development of manufactures and foreign trade wealth has rapidly increased. There has been a notable drift of rural population to the cities and towns, building has been rapid and continuous, real estate values have advanced, dwellings have become larger, more luxurious, and better furnished, and the whole system of family life has become more elaborate and expensive. In this rapid improvement of their personal surroundings the people have naturally preferred articles of home manufacture, so that during the decade under consideration the products of German industry have been largely absorbed by local demands and thus withheld from export. Moreover, the industrial situation, and consequently the exporting capacity of the country, have, since 1888, been affected by new

conditions, the full force and effect of which can not yet be accurately measured. During the 8 years preceding that epoch the policy of the Imperial Government had been in favor of the agricultural, rather than the industrial, classes. In order to help the farmers and check the tendency of the rural population to emigrate or move to the towns, foreign meats and animals were subjected to increased import duties, or, as in the case of American pork, excluded altogether. The duties on cereals and liquors were advanced and bounties awarded to exports of homemade beet sugar. Under these circumstances the cost of living inevitably increased. The supply of bread and meat was not perceptibly augmented, but their cost rose until the German workingmen, particularly in the mines and iron mills, united in strenuous demands for higher wages. They claimed a share in the steadily augmenting prosperity of the time in which they lived. The miners' strikes of 1888 and the socialist agitations which followed combined with the enormously increased consumption of fuel to raise the price of coal, until the cost of many manufactures of iron, steel, and other metals has been pushed above the limit of profitable export. The important exports of steel manufactures to the United States from the Dusseldorf district, for example, shrunk to a fraction of their former proportions when the growing price of coal lifted the cost of production above the point at which German steel came into competition with that of Great Britain. The development of all manufactures, the substitution of coal stoves and furnaces in dwellings for the old porcelain wood-burners, and the expansion of railway traffic has increased the aggregate consumption of coal beyond the expansion of mining capacity, so that to-day one German steamship company derives its fuel supply mainly from England and another has begun the importation of coal from the United States. Finally, the colonial ventures of Germany have not yet developed their expected influence on the export trade of the mother country, and their outlet to the Argentine Republic, which had become important, is now under a cloud of financial uncertainty.

Whether these conditions, which have, in the aggregate, operated to restrain the increase of Germany's exports so far below that of her imports, are permanent and inflexible or merely temporary and susceptible of being ameliorated or removed by skillful legislation and improved industrial methods is the great problem which now occupies German economists. The present general and determined strike of coal-mine operatives in Westphalia and the aggressive attitude of the labor party throughout the Empire do not portend any immediate amelioration in the costs of manufacture.

From an American standpoint, the chief interest in this review will naturally attach to such a presentation of statistics as will best illustrate the relation which the United States has borne toward Germany during this interesting period of the latter's development. Nearly 76 per cent. of Germany's entire foreign trade is with eight countries, viz, Great Britain, Austria, France, Belgium, the United States, the Netherlands, Russia, and Switzerland. Her total import from each of these countries and its relative

percentage of the whole during the years 1880 and 1889, respectively, were valued as follows:

Table giving a comparison of imports into Germany in 1880 and 1889.

Countries.	1880.		1889.	
	Value.	Percentage of total.	Value.	Percentage of total.
Austria-Hungary	$98,749,000	14.3	$127,865,262	13.1
Great Britain	83,693,414	12.3	160,617,394	16.5
Russia	80,126,746	11.8	131,327,686	13.4
France	59,068,406	8.7	67,933,430	6.9
Belgium	46,379,536	6.8	90,254,314	8.2
Netherlands	46,083,256	6.8	68,110,840	7
United States	42,140,280	6.2	75,565,400	7.7
Switzerland	33,954,988	5	43,095,612	4.4

So that during the 9 years under consideration Great Britain and her colonies, as a source of German imports, rose from the second to the first place, and the United States climbed from the seventh place to the fifth in order, passing above both France and the Netherlands. If we consider the percentage of increase, the United States makes a still better showing, rising to the second place in the list with an increase of 79.6 per cent., against 91.8 for Great Britain, 72.8 for Belgium, 63.5 for Russia, 47.4 for the Netherlands, 29.4 for Austria-Hungary, 26.5 for Switzerland, and 14.9 for France.

Turning now to the exports of Germany, we find the following interesting comparison:

Table giving a comparison of exports from Germany in 1880 and 1889.

Countries.	1880.		1889.	
	Value.	Percentage of total.	Value.	Percentage of total.
Great Britain	$105,057,960	15	$155,256,444	20
Austria-Hungary	70,468,944	10	81,101,356	10.5
France	69,167,322	9.9	50,019,508	6.4
Netherlands	54,135,718	7.7	61,448,982	7.9
Russia	54,031,236	7.7	46,859,582	6
United States	42,951,860	6.1	94,018,806	12.1
Switzerland	41,796,370	6	42,221,676	5.4
Belgium	39,648,396	5.6	32,656,218	4.2

Here at last should be found solace and comfort for the German exporters and statesmen who have railed so incessantly against the economic policy of the United States since our tariff legislation of 1883. From the sixth place as a purchaser of German goods in 1880 our country rose to second place in 1889, with a rate of increase amounting to 119.4 per cent., against 47.8 per cent. increase for Great Britain, 15.2 for Austria, 13.6 for the Neth-

erlands, and a decrease for the rest as follows: Russia, 13.2 per cent.; Belgium, 18 per cent.; France, 27.9 per cent.; while Switzerland remained stationary.

This demonstration becomes still more complete when we take the German exports to the United States during 1890, which amounted to $101,465,526, an increase of $7,383,084 over those of the preceding year. The returns for the first quarter of 1891 show a small decrease in German exports to the United States compared with those of the same quarter in 1890, but, with the exception of woolens and cutlery, this falling off does not appear to be attributable to changes in import duties made by the United States tariff law of October, 1890. In fact, the most important deficit is in sugar, which became duty free by the provisions of that act after April 1, 1891, and was therefore naturally withheld from export to the United States during the quarter preceding that date.

The deficit of the past quarter is still further attributable to two facts: first, the overburdened condition of the American market by reason of excessive importations during 1890, in anticipation of the tariff legislation, which was then pending; and, second, the long, severe winter in Germany, which closed the Rhine and other navigable water courses during a period of several weeks and greatly restricted shipments of heavy freights to the seaboard.

FRANK H. MASON,
Consul-General.

UNITED STATES CONSULATE-GENERAL,
Frankfort, April 28, 1891.

GERMAN RAILWAY STATISTICS.

REPORT BY CONSUL-GENERAL EDWARDS, OF BERLIN.

MILEAGE, TRACKS, AND STATIONS.

According to the official Reichs-Anzeiger, the following are the correct German railway statistics for the fiscal year 1889–'90:

The total length of State railways and private railways under State direction was 36,787.04 kilometres, of which 11,626.05 kilometres were double tracked and 89.67 kilometres had three or more tracks. There were 3,460 depots, 1,665 way stations, and 1,054 stopping places. The details are given in the following paragraphs.

The imperial railways in Alsace-Lorraine had a length of 1,542.52 kilometres, of which 636.16 kilometres were double tracked. There were 164 depots, 67 way stations, and 57 stopping places. Military railway, 45.61 kilometres, 6 depots, and 3 way stations.

The Prussian State railways had a length of 23,943.64 kilometres, of which 8,919.84 kilometres had two tracks and 84.96 kilometres three or more tracks. There were 2,112 depots, 925 way stations, and 629 stopping places.

The Bavarian State railways had a length of 4,652.56 kilometres, of which 414.84 kilometres were double tracked. There were 522 depots, 158 way stations, and 137 stopping places.

The Saxon State railways had a length of 2,303.23 kilometres, of which 734.43 kilometres had two, and 1.16 kilometres three or more, tracks. There were 226 depots, 150 way stations, and 84 stopping places.

The Würtemberg State railways had a length of 1,593.38 kilometres, of which 304.9 kilometres were double tracked. There were 275 depots, 14 way stations, and 31 stopping places.

The Baden State railways had a length of 1,383.41 kilometres, of which 520.32 kilometres were double tracked. There were 56 depots, 233 way stations, and 70 stopping places.

The Mayence-Neckar Railway had a length of 99.17 kilometres, of which 79.20 kilometres were double tracked. There were 15 depots, 10 way stations, and 1 stopping place.

The Upper Hessian railways had a length of 208.45 kilometres, 11 depots, 21 way stations, and 14 stopping places.

The railways of Mecklenburg-Schwerin under the direction of the State had a length of 602.56 kilometres, of which 20.36 kilometres were double tracked. There were 36 depots, 48 way stations, and 8 stopping places.

The Oldenburg State railways had a length of 409.35 kilometres, 32 depots, 32 way stations, and 18 stopping places.

The private Weimar-Berka-Blankenhain Railway had a length of 32.16 kilometres, 5 depots, 7 way stations, and 2 stopping places.

The six private railways under State management had a length of 103.94 kilometres, 11 depots, 10 way stations, and 8 stopping places.

The fifty-nine private railways under their own management had a length of 4,389.58 kilometres, of which 823.37 kilometres were double tracked. There were 437 depots, 344 way stations, and 133 stopping places.

Altogether, therefore, there were in Germany 41,220.56 kilometres of railway, of which 12,449.42 kilometres had two tracks and 89.67 kilometres three or more tracks. There were 3,909 depots, 2,019 way stations, and 1,195 stopping places.

ROLLING STOCK.

On State railways and railways under State direction there were 12,620 locomotives, 23,487 passenger cars with seats and standing room for 997,832 persons, and 254,776 freight cars with a carrying capacity of 2,502,568 tons. The value of this property was 562,878,987 marks, 188,073,453 marks, and 741,463,101 marks, respectively.

On private railways under State management there were 21 locomotives, 36 passenger cars with seats and standing room for 1,407 persons, and 776 freight cars with a carrying capacity of 7,524 tons. The value of this property was 765,440 marks, 213,284 marks, and 1,951,874 marks, respectively.

The private railways not under State management had 855 locomotives, 1,881 passenger cars with seats and standing room for 80,643 persons, and

18,007 freight cars with a carrying capacity of 178,314 tons. The value of this property was, respectively, 33,469,660 marks, 13,168,883 marks, and 51,194,935 marks.

In addition to these, the State railways had 1,557 postal cars and the private railways 90.

PASSENGERS.

The number of persons transported on State railways and railways under State direction was 343,804,927, of whom 1,940,661 traveled first class, 34,765,421 second class, 212,038,739 third class, 88,641,932 fourth class, and 6,418,174 were soldiers.

On the private railways under State management 1,265 persons traveled first class, 84,938 second class, 912,983 third class, 23,921 fourth class, and 10,279 were soldiers; total, 1,033,386.

On private railways not under State management 140,019 persons traveled first class, 3,582,195 second class, 26,005,625 third class, 1,517,091 fourth class, and 741,763 were soldiers; total, 31,986,693.

The total number of railway travelers was 376,825,006, of whom 2,081,945 traveled first class, 38,432,554 second class, 238,957,347 third class, and 90,182,944 fourth class. On an average, 24.52 per cent. of the seats and standing places were occupied.

FREIGHT.

The total amount of freight transported was 212,093,339 tons, of which 192,115,961 tons were transported on State railways or railways under State direction, 880,131 tons on private railways under State management, and 19,097,247 tons on private railways not under State management.

The sorts of freight transported on State railways were: Express and fast freight, 664,669 tons; ordinary freight, 169,560,801 tons; military freight, 276,097 tons; cattle, 2,292,461 tons; supplies, 19,341,933 tons. On private railways under State direction: Express and fast freight, 2,398 tons; ordinary freight, 857,490 tons; military freight, 356 tons; cattle, 2,115 tons; supplies, 17,772 tons. On private railways not under State management: Express and fast freight, 86,020 tons; ordinary freight, 18,431,782 tons; military freight, 27,367 tons; cattle, 303,981 tons; supplies, 248,147 tons.

In addition to this, 1,720,313 tons of wares were transported without charge. On an average, on State railways each ton was transported 108.8 kilometres; on private railways under State management, 16.31 kilometres; and on private railways not under State management, 48.85 kilometres.

COST OF BUILDING.

The building costs of all the German railways were 9,775,901,446 marks, or, on an average, 240,388 marks per kilometre. To this must be added loss on exchange, interest during building period, and other expenses, 738,647,224 marks, while gain on exchange and other receipts, amounting to 498,347,186 marks, must be deducted. Hence the total building cost was

10,016,201,484 marks, or, on an average, 246,297 marks per kilometre. In consequence of differences at the time of change of ownership, as, for instance, when private roads came into the possession of the State, the cost to the present owner of the railways was 10,259,014,928 marks, or, on an average, 252,268 marks per kilometre.

The capital thus used was obtained as follows: For State railways, by means of a State loan of 2,591,675,576 marks, from extraordinary funds 627,977,583 marks, and otherwise 6,260,641,223 marks; for private railways, by the emission of shares valued at 453,108,386 marks, obligations to the extent of 293,235,056 marks, otherwise 4,162,000 marks, and the debt is 28,214,504 marks.

RECEIPTS.

The receipts of all the roads from passenger traffic were 333,894,172 marks, or 8,350 marks per kilometre as follows: From first-class tickets, 15,821,806 marks; second-class, 86,844,192 marks; third-class, 158,750,248 marks; fourth-class, 54,079,803 marks; military transportations, 7,747,966 marks; transportation of luggage and dogs, 10,650,157 marks. The receipts from freight were as follows: Fast freight, 20,259,183 marks; ordinary freight, 771,280,177 marks; postal matter, 1,514,056 marks; military matter, 2,910,930 marks; cattle, 25,718,348 marks; supplies, 28,639,555 marks; other sources, 22,919,092 marks; total from freight, 873,241,311 marks, or 21,256 marks per kilometre. In addition to these there were other receipts, exclusive of interest on mortgages, amounting to 70,005,061, which raised the total receipts to 1,264,656,117 marks, or 31,104 marks per kilometre.

EXPENSES.

The expenses were as follows: General management department, 49,796,114 marks; executive railway department, 43,220,066 marks; executive transportation department, for depot service 80,773,723 marks, for freight service 44,735,329 marks, for train employé service 108,477,471 marks; total personal expenses, 327,002,661 marks, or 8,042 marks per kilometre. The other expenses were: For the general management department, 21,099,510 marks; executive railway department, 4,536,378 marks; executive transportation department, for depot service 10,428,465 marks, for freight service 5,780,267 marks, for train service 6,417,384 marks; keeping the roads in order, 76,719,605 marks; costs of railway transportation, 138,425,837 marks; repairs of permanent way, 46,638,949 marks; repairs of rolling stock, etc., 38,711,631 marks; use of foreign roads, 13,638,145 marks; use of foreign cars, etc., 3,426,494 marks; total, 374,427,735 marks, or 8,935 marks per kilometre. The total business expenses, exclusive of those for extensions and interest, were 683,117,000 marks, or 16,801 marks per kilometre, which was 54.02 per cent. of the total receipts.

SURPLUS.

The total surplus, after deducting expenses from receipts, was 505,681,134 marks, or 44.04 per cent. of the gross receipts, which represents 5.88 per cent. of the building cost and 5.6 per cent. of the capital invested. If the cost for extensions and interest be deducted, the surplus per kilometre will be reduced to 14,303 marks. To this surplus are to be added 721,245 marks from the repair and reserve fund and 2,156,227 marks from earnings on foreign roads, etc., while 2,348,166 marks are to be deducted, this amount being required by law to be laid aside for the repair and reserve fund. Thus the real available surplus was 566,210,440 marks.

EMPLOYÉS.

The total number of officials and workmen employed, on an average, during the year was 315,729, or 7.77 per kilometre. The salaries and wages of these amounted to 362,167,226 marks, or 8,907 marks per kilometre, or 28,581 marks per 100,000 marks of gross receipts, or 1,146 marks ($270) per man. Of this amount, 14,955 persons employed in the general management department received 49,767,121 marks (an average of 3,328 marks, or $800); 110,515 persons employed in the railway service received 78,857,457 marks (an average of 704 marks, or $167); 190,259 persons in the transportation service, 233,542,648 marks (an average of 1,229 marks, or $300). The average number of persons employed in the workshops during the year was 55,363, or 139 persons per kilometre of road. The amount paid them was 56,305,593 marks, or 1,416 marks per kilometre of road (an average of 1,020 marks, or $204).

ACCIDENTS.

The number of accidents resulting in death, or serious injury of rolling stock, or causing a delay of at least 30 minutes to passenger trains or 60 minutes to freight trains (not taking into account accidents which occurred in workshops or on roads in course of construction) was 3,088, in which 602 persons were killed and 2,112 wounded. Of these, 2,840 occurred on State railways, 375 being running from the track, 273 collisions, and 2,192 other accidents.

On State railways 561 persons were killed and 1,978 wounded. On the private railways under State management only one accident occurred by which a railway official was injured. On private railways not under State management there were 47 runnings from the track, 31 collisions, and 169 other accidents, resulting in the death of 41 persons and the injury of 133. The total number, therefore, was 602 killed and 2,112 wounded. In addition to these, 4 persons were killed and 350 wounded while working on the track, loading or unloading cars, etc. One hundred and eighty-six attempts to commit suicide were made, resulting in 157 persons being killed and 29 wounded.

ADDITIONAL STATISTICS.

In addition to the foregoing, 177 locomotives, 390 passenger cars, and 4,151 freight cars were in use upon narrow-gauge railways, the capital thus invested amounting to 45,426,900 marks, or 52,066 marks per kilometre. The total receipts were 3,975,703 marks (4,682 marks per kilometre). The total expenses were 2,486,227 marks (2,928 marks per kilometre). The surplus was 1,489,476 marks, or 3.28 per cent. of the invested capital. The number of officials and employés was 1,463. There were 55 accidents, in which 4 persons were killed and 23 wounded.

W. H. EDWARDS,
Consul-General.

UNITED STATES CONSULATE-GENERAL,
Berlin, May 9, 1891.

A NEW ELECTRIC BOAT.

REPORT BY CONSUL CATLIN, OF ZURICH.

Zurich's remarkable activity in the field of electric invention has, within the last few days, been newly demonstrated by the trial trip of the new electric-accumulator boat *Zurich*, which took place here on the 7th instant.

The shores of the lake were lined with spectators curious to witness the novel spectacle. The trial proved in every way successful, and, as the event may be said to introduce a new era, or, at all events, to mark a long step forward in navigation, a description of the boat is undoubtedly of interest and value. It is claimed for it that it is the first of its kind on the European continent and the largest in existence anywhere. England has already built some smaller ones, accommodating 30 or 40 passengers, while this one has room for from 80 to 100. Its length is about 50 feet, its draft 4 feet, and its total weight about 16 tons, including machinery and accumulators, which alone weigh about 6½ tons. With the exception of the lever for stopping the current, the steering wheel, and the apparatus for regulating the amount of power to be applied (amperometer and voltameter), the deck is clear of all machinery. In the hold where the machine room is located there are ranged in order no less than 56 accumulators for storing the electric power, which is thence transmitted to the dynamo machine, the armature of which, thus set in motion, communicates directly with the screw propeller. On the trial trip the revolutions varied from 248 to 365 per minute.

The accumulators, which are an invention of the machine factory at Oerlikon, near this city, vary from those hitherto in use, both in the form of their construction and in the use of a gelatinous electrolyte for decomposition by the electric current. The latter does not act directly upon the leaden plates themselves, but upon oxide of lead placed in the interstices of lead gratings, the lead itself serving merely as bearer and conductor of the current. The gratings are constructed with triangular openings, and are

provided with two channels, instead of one, for conducting the current. The system of plates, when placed perpendicularly, is such that the positive current is conducted by the upper, and the negative by the lower, corners, thus insuring a more equable distribution of the stream and a longer use of the plates.

The rate of speed attained on the trial trip was highly satisfactory. A course of about 3 miles was covered in 25 minutes and 25 seconds, showing a speed of about 8 miles per hour. A good average of 6½ miles per hour may be counted upon for longer trips. One man can manage the boat, a single movement of the lever sufficing to set the craft in motion either forward or backward or to stop it. It is also said to obey the rudder readily. The cost of the *Zurich*, as the new boat is called, is between $5,000 and $6,000. It will be shipped from here in a day or two to Frankfort, where it is to be exhibited as a specimen of Swiss inventive skill at the electrical exposition in that city, and afterwards used in regular passenger traffic on the River Main.

GEORGE L. CATLIN,
Consul.

UNITED STATES CONSULATE,
Zurich, May 11, 1891.

AMERICAN LABORERS IN COLON.

REPORT BY CONSUL SIMS.

I wish to call attention to the condition of the Americans who come to Central and South America in search of work.

Day labor here is cheap. Fifty cents in Colombian silver (35 cents gold) is the regular daily wages, and Americans can not live on it, and, not being acclimated, can not do the work required.

Every day American citizens come to me to be sent home. They are not seamen, and I have to rely on the kindness of masters of American vessels to send the poor fellows home.

The Nicaragua Canal has lured many of these poor people here, and now they are adrift barefoot, naked, and starving in Central and South America, dependent on the consideration of American consuls to provide them means to get back home. Some poor fellows who were sick and unable to work their passage back have doubtless died in the swamps.

I hope this emigration of laborers from the United States to this country can be checked; there is no room for them, and death alone awaits them here.

W. E. SIMS,
Consul.

UNITED STATES CONSULATE,
Colon, April 24, 1891.

AMERICAN OLEO OIL IN THE NETHERLANDS.

REPORT BY CONSUL GARDNER, OF ROTTERDAM.

Oleo oil of the value of $10,000,000 was imported into the Netherlands from the United States during the calendar year 1890. It was purchased by the makers of Dutch "margarine" (substitute butter), whose present consumption of the American oil exceeds by more than 100 per cent. the consumption of 5 years ago.

IMPORTS OF SIX YEARS.

The yearly ratio of this increase of trade is shown in official statistics of exclusively American oleo imports, as follows:

Years.	Quantity.	
	*Tierces.**	*Pounds.*
1890	259,000	93,240,000
1889	245,000	88,200,000
1888	173,000	62,280,000
1887	184,600	66,456,000
1886	121,480	43,732,800
1885	121,287	43,663,620

*The tierce averages 360 American pounds, net.

EUROPEAN SOURCES OF SUPPLY.

Other countries sending oleo oil to this foremost margarine market of the world are England, France, and Austria. These supply only 20 per cent. of the whole, however, the remaining 80 per cent. coming from the United States; and the oleo products of these European countries, in comparison with the American product, is distinctly inferior in quality and price.

PRICES DURING FIVE YEARS.

From 1886 to the close of 1890 the prices of oleo oil in the Netherlands markets tended steadily downward, the range being from 100 to 112 florins per 100 kilogrammes (18 to 21 cents per pound) in 1885–'86 down to 45 to 60 florins per 100 kilogrammes (8 to 11 cents per pound) in 1890. Within the present calendar year, and especially within the last 60 days, there has been a marked and sustained rise, owing to depleted stocks; and present quotations, which are (April 20) still advancing, are, for best grades, 55 to 72 florins per 100 kilogrammes (about 10 to 13 cents per pound).

AMERICAN EXPORT CITIES.

The chief city of export of oleo oil in the United States is Chicago. During 1890 it sent to this market quite 60,000,000 pounds, or more than one-half the total American supply. Other export cities of importance are New York, Philadelphia, Omaha, Kansas City, and Boston.

PRINCIPAL MARKET IN THE NETHERLANDS.

The trade in American oleo oil for the Netherlands centers in Rotterdam. There are in this city eight importers and fifteen brokers dealing exclusively in the product. One of the great Chicago packers has here his own representative sent from Chicago, while the others are represented by resident firms of established standing and reputation.

MARGARINE FACTORIES IN THE NETHERLANDS.

The large margarine factories in the Netherlands number 32—in Rotterdam, 5; Oss, 4; Nymwegen, 4; Bois-le-Duc, 3; Haarlem, 2; Helmond, 2; and in Dordrecht, Oosterhout, Asten, Alkmaar, Amsterdam, Waspik, Zwammerdam, Gouda, the Hague, Middelburg, Oldenzaal, and Weesp, 1 each.

These factories differ greatly in size, capacity, and value. All, however, are modern in equipment, and those more recently built represent large investments, proving the faith of their Dutch owners in the future of margarine. One plant lately erected in Rotterdam cost 500,000 guilders ($200,000) and ranked among the imposing structures of the city.

A REPRESENTATIVE FACTORY.

Possibly the most representative among margarine factories of the Netherlands is one situated at Oss, in the province of North Brabant. It is owned and operated by Anton Jurgens, whose family through four successive generations have made butter on the site of the present factory. The buildings and grounds are extensive, the machinery employed is ingenious, efficient, and costly, and from end to end the establishment is a marvel of Dutch orderliness and cleanliness.

This factory produces and ships regularly 25 tons of margarine per week. It gives steady employment to two hundred heads of families, many of whom are expert workmen. It consumes each week an average of 125,000 litres of milk, the yield of 10,500 cows owned by 2,000 small farmers living in the adjacent country districts.

The little city of Oss has 6,000 inhabitants. It has four margarine factories, but no other industry of note. Directly or indirectly its 6,000 people, as also the majority of the farmer folk for miles around, get their very comfortable living out of the margarine industry, which has become here, as elsewhere in Holland, a permanent local beneficence.

MARGARINE EXPORTS FROM THE NETHERLANDS.

The above-reported increase of oleo-oil imports into the Netherlands, more than 600 per cent. within 5 years, indicates a corresponding increase in the exports of margarine. The factories here are employed chiefly in supplying a foreign demand, the estimated home consumption of margarine being only 10 per cent. of the total output.

Statistics relating to margarine exports are, however, unobtainable. There are, so far as I am able to learn, no records of value for purposes of comparison, either public or private. Commercial statistics in the Netherlands are kept but indifferently well at best; and as to margarine, until the enforcement in January, 1890, of the national law requiring all margarine to be branded, it had uniformly been classified with other dairy products, never separately.

Experts in the trade whom I have questioned agree that the present exports are considerably more than twice as large as those of 5 years ago, and that the foreign market is steadily increasing.

The countries principally purchasing the Netherlands margarine are Great Britain, Belgium, and Germany, countries, it is significant to note, whose cities, above all other cities of Europe, teem with work people earning small wages, to whom cheap food is essential.

The glimpse thus afforded of the growth and present extent of a permanent and valuable industry of the Netherlands, which had its exceedingly unpopular beginning less than 20 years ago, suggests a glance at the cause of such growth and at the methods whereby it has been attained.

BEGINNING OF MARGARINE MANUFACTURE.

The step preliminary to the manufacture of margarine in the Netherlands was the adulteration of cream butter. In 1872–'74 the world-famed Holland dairies, in sharp competition with the butter-makers of other countries, began to employ sirup and glucose for enlarging and cheapening their product. The adulteration increased from 10 to 25 per cent., then to 50 per cent. As the proportion of new ingredients grew, the necessity for substances absolutely wholesome became imperative.

Repeated and expensive experiments under widely varying conditions proved oleo oil to be possessed of actual and high merit as a food substance, and it was a matter of course—oleo being in far larger supply than the cream of the dairy—that the animal oil should succeed speedily to the place of chief ingredient.

Thus was evolved, out of man's cupidity, a new food staple that blesses man and a new industry that profitably employs tens of thousands.

At the risk of giving what may be already familiar to some readers of this report, I now present, with rather ruthless condensation, a description of the manufacture of oleo oil and of margarine from oleo oil substantially as given by Anton Jurgens, of Oss (above referred to), in a paper read by him before the Society of Arts of Great Britain:

Margarine, as manufactured at our factories in Holland, is composed of oleomargarine (oleo oil), milk, the purest vegetable oil that can be obtained, and real butter.

PROCESS OF MAKING OLEO OIL.

Oleomargarine, the chief constituent, is prepared as follows: From the freshly slaughtered carcasses of cattle in the abattoirs of large cities the superfluous portions of suet are taken and carted in vans specially fitted to the factories of manufacturers of repute, where the fat is

carefully sorted and the very finest element and sweetest portions selected for the manufacture of oleomargarine.

Fat forms about one-twentieth of the weight of a healthy animal. Only a small portion of this can be consumed as food in the ordinary way; the rest used to find its way to the tallow-melter. I claim it is a matter of no small importance, therefore, that we are enabled by our process to produce, at a moderate price, an abundant supply of wholesome food, and at the same time to utilize a very large proportion of a previously almost waste material.

The fat, when selected, is passed into a machine which reduces it to a pulp about the consistency of real cream. Thus brought to an even texture, the fat is now put into wooden vats and heated by steam or hot water at a moderate temperature, not too hot, because too high a degree of heat imparts to the fat a flavor of wasting and detracts seriously from its value as a substitute for butter. When melted the fat is run into jacketed vats to cool and slowly clarify. After some hours the stearine, or harder portion, begins to solidify, its whiteness contrasting conspicuously with the bright yellow of the oleo. When the material has acquired sufficient consistency, it is wrapped, in small quantities, in clean white cloths and subjected to hydraulic pressure of about 100 tons, in order that as much as possible of the oleo may be extracted. The stearine still finds its way to the tallow-melter, but the pure oleo is destined to a better application.

CONVERTING OLEO OIL INTO MARGARINE.

This oleo oil and a proportion of butter, milk, and of the finest and sweetest vegetable oil are now churned together for some time, after which the churned mixture is cooled by coming into contact with ice-cold water, and is then pressed between large fluted rollers, during which process a due proportion of salt is incorporated. It is delivered by these rollers upon large tables on rollers, which pass it on to the packers.

The oleo oil treated in the manner here described differs very little from the fat which forms the cream in milk from which butter is churned, except that in the case of oleo oil the fat is taken direct from the animal, the stearine being extracted by pressure, while in the case of natural butter the fat is converted by the action of the mammary tissues of the cow into cream, which, being churned, the fatty matter is recovered in the form of butter.

CONCLUSION.

In closing this report, I want to state three conclusions which, through the development of this "substitute-butter" industry, have been arrived at by different classes of people in the Netherlands. Perhaps they may be found not wholly lacking in significance for the people of the United States.

The first is a conclusion reached by the lawmakers. Substitute butter from oleo oil, manufactured by approved methods, is a food article of demonstrated merit, and has come to stay, so far at least as European countries are concerned. It can not be legislated out of existence. By legislation its production can not even be greatly restricted. Attempts in that direction avail nothing on behalf of the farmer and directly injure the armies of wage earners in cities, who need cheap, wholesome food. Legislation can compel the margarine to be branded and sold for what it really is, thus benefiting the honest manufacturer not less than the consumer, but at that point legislation in the Netherlands has been wisely content to stop.*

The second conclusion is one that has been reached by the farmers. Farmers in the Netherlands who own cows and have hitherto made butter

* The law of the Netherlands permits oleo oil (the raw material) to enter duty free, thus giving to the margarine industry a positive encouragement.

have been forced to admit, as a result of experience, that the manufacture or sale of substitute butter, though ever so extensive, does not appreciably injure farm profits. If one be a large farmer with good dairy facilities and able to produce gilt-edge dairy butter, he finds now a more exclusive market and better prices than in the days when every owner of a cow made butter. If, however, one lack facilities for the best butter-making, and if one be owner of few cows, he is able to command at the margarine factory an established, all-the-year-round price for his milk that yields larger net profit than did the erstwhile sale of his indifferent butter. Large dealers, also, who formerly conducted trade in butter, find the present business in margarine no less profitable.

The third conclusion here set down is a conclusion arrived at by the people who buy butter or its substitute. Consciously or ignorantly, in European countries, and, I think, also in the United States, a very large percentage of the less well-to-do people must eat substitute butter. I have official statistics before me as I write which show, after a trifle of computation, that if all the milk of all the cows in Great Britain were devoted to butter-making, the utmost possible average product of a year would be just 4 ounces per week per head of population. The European work people conclude, thus, that it is for them, to a very considerable extent, a matter of substitute butter or no butter food whatever. They conclude, also, as the fast-increasing sales of margarine abundantly prove, that the cleanly, healthful, nutritious substitute made by known and reputable manufacturers is far preferable to doubtful butter of unknown composition and origin. Now let it be added that the best margarine costs at retail but a little more than one-half as much as real butter,* and the statement with which I close this report should seem superfluous, to wit, that the old-time obstinate prejudice against substitute butter has virtually disappeared from European cities.

WALTER E. GARDNER,
Consul.

UNITED STATES CONSULATE,
Rotterdam, April 20, 1891.

AMERICAN OLEO OIL IN THE NETHERLANDS.

SUPPLEMENTARY REPORT BY CONSUL GARDNER, OF ROTTERDAM.

Supplementing a report on American oleo oil in the Netherlands, sent from the Rotterdam consulate in April, the following expert estimates, until now unobtainable, are submitted:

In the calendar year 1885 the estimated total output of Netherlands margarine (the finished butter product) was 92,400,000 American pounds; in the calendar year 1890 the estimated total was 165,000,000 pounds, an in-

*The present retail selling price of the best dairy butter in Rotterdam is 36 American cents per American pound; of the best margarine, 20 cents per pound.

crease in the annual output within 5 years of 72,600,000 pounds. Of the above-given total product for the year 1890, it is estimated that 127,600,000 pounds were exported, while only 37,400,000 pounds went into home consumption.

The foreign countries to which the Netherlands margarine is at present exported are, in the order of their importance as margarine-buyers, England, Belgium, France, Spain, Portugal, Sweden, Norway, Denmark, the Transvaal, and the Dutch, English, and Portuguese colonial possessions.

At the present time seven-tenths of all the oleo oil (the raw material) used in the manufacture of margarine in the Netherlands comes from the United States.

WALTER E. GARDNER,
Consul.

UNITED STATES CONSULATE,
Rotterdam, May 23, 1891.

AMERICAN DRIED APPLES IN GERMANY.

REPORT BY CONSUL-GENERAL EDWARDS, OF BERLIN.

I have the honor to invite attention to the inclosed translation of a clipping from the Berlin press relative to the action of the sanitary authorities in the case of American dried apples.

It will be seen by reference thereto that the presence of the most insignificant quantity of zinc in American dried apples is sufficient to characterize such food product as "ruined" in the sense of the food laws of Germany. It will also be seen that this decision was reached notwithstanding the declaration of the official expert, Dr. Dissenhoff, to the effect that there could be no chance of the healthfulness of the apples being impaired by the presence of the trivial quantity of zinc which he found.

The attention of those interested in the exportation of this important article should, in my opinion, be called to the requirements of the sanitary laws of Germany, in order that they may change their method of drying the apples.

W. H. EDWARDS,
Consul-General.

UNITED STATES CONSULATE-GENERAL,
Berlin, April 17, 1891.

[Inclosure in Consul-General Edwards's report.—Translation.]

Dried apples imported from America, which have become a very popular article of trade, have been unable to stand the test before the German sanitary police and have frequently caused the prosecution of those who have sold them. This also happened to Merchant Warnatz, who yesterday stood before department No. 93 of the court charged with a breach of the articles-of-food law. He had, he claimed, by mistake sold American dried apples, in spite

of the fact that he had been informed by the police that his supply contained zinc, and consequently must not be offered for sale.

The expert, Dr. Bischoff, testified that the police authorities of Hamburg and Kiel were first to call attention to the fact that these wares contain zinc. Dr. Bischoff attributed the presence of this undesirable ingredient to the fact that in America the sliced apples are dried upon zinced wire grates, in which way the acid of the apple comes into contact with the zinc. This, however, has a very trivial result—in 100 grammes of apples he found 12 centigrammes of zinc salt—and he testified that there can be no chance of the healthfulness of the apples being thus impaired.

The presence of this foreign material, however, is sufficient to characterize the wares as "ruined" in the sense of the law.

The court recognized only carelessness in this case, and imposed a fine of 10 marks.

SHIPBUILDING TRADES OF THE UNITED KINGDOM.

REPORT BY CONSUL SHERMAN, OF LIVERPOOL.

I inclose herewith, from the annual report for 1890 of the United Society of Boiler-makers and Iron-Ship Builders of the United Kingdom, figures showing the production of shipping during the last 10 years, some interesting information concerning the affairs of the society, and the rules of the recently organized Federation of Engineering and Shipbuilding Trades of the United Kingdom.

THOMAS H. SHERMAN,
Consul.

UNITED STATES CONSULATE,
Liverpool, April 16, 1891.

EXTRACTS FROM THE FIFTY-SIXTH ANNUAL REPORT FOR 1890 OF THE UNITED SOCIETY OF BOILER-MAKERS AND IRON-SHIP BUILDERS OF THE UNITED KINGDOM.

[Inclosure 1 in Consul Sherman's report.]

The year will long be remembered in the annals of the shipbuilding industry as a most satisfactory year for the large amount of tonnage completed, also for the peace and harmony that has prevailed between employers and ourselves. The output of shipping is not so great as the previous year. The vessels launched during 1889 reached the enormous amount of 1,332,889 tons, while 1890 is only slightly below that year, the output for the whole of the United Kingdom being 1,242,124 tons, or 53,812 tons less than the best year on record. It is, however, a larger tonnage than any year during the preceding decade; it is higher, even, than the exceedingly busy year 1883. For comparison, we produce the output for the last 10 years, viz:

Table showing the rise and fall in shipbuilding for the last 10 years.

Year.	Total production.	Year.	Total production.
	Tons.		*Tons.*
1881	1,000,000	1886	473,675
1882	1,200,000	1887	578,668
1883	1,250,000	1888	903,687
1884	750,000	1889	1,332,889
1885	540,422	1890	1,279,077

To show how the trade has been allocated to the various shipbuilding centers, we append a return of the total tonnage completed during the past year in the different shipbuilding rivers, viz:

Summary of vessels built during 1890.

Yards.	Tons.	Yards.	Tons.
Northeastern ports	676,137	Grangemouth	18,362
Clyde	349,945	Aberdeen	9,228
Belfast	66,361	Londonderry	10,593
Mersey	27,763	Miscellaneous ports	22,068
Barrow-in-Furness	24,665	Total	1,242,124
Humber	9,624	Continental yards	36,953
Dundee	24,494	Grand total	1,279,077
Whitehaven and Workington	2,884		

Broadly put, the northeastern ports show a decrease, the Clyde an increase, whilst the subsidiary building centers have either a small decrease or are stationary generally.

There may be a time of depression in store for us, but it is an encouragement to know that the work now on hand will last for several months. This is clearly demonstrated by Lloyd's Register shipbuilding returns for the quarter ended the 31st of December last. According to these returns, there were building at the close of the year in British shipyards a total of 471 vessels, representing 734,010 tons. This quantity falls short of the tonnage on the stocks at the close of 1889 by over 138,000 tons, or 16 per cent., but it is greater than that building at the close of the previous quarter (September 30) by 81,000 tons. In addition to these 734,000 tons in course of construction, there were, at the close of the year, 178 vessels of 293,288 tons, for the commencement of which preparations were being made. The latter is all prospective work, practically not yet begun, and, even if no further orders are received, the vessels now building and those about to be built are sufficient in number to keep the trade fairly well employed for quite 6 months to come.

In the table of ships building at foreign ports, which Lloyd's now include in their return, the only countries building anything like an appreciable quantity of tonnage are Germany, Holland, Italy, and the United States. The total tonnage credited to Germany is 49,900 tons; to Holland, 23,000 tons; to Italy, 23,900 tons; and to the United States, 32,300 tons; compared with the British total of 734,000 tons.

During the past year steps have been taken to restrict overtime in our various yards and shops, and we have succeeded in accomplishing this without causing any friction with our employers, as they see as well as we do that overtime is not a benefit to them any more than it is to us when it can be avoided. Systematic overtime is unnatural and injurious to even the healthiest and strongest workman. It impairs his health, destroys his energies, his physical powers decay, until ill health fastens upon him, the result being often premature death and an early grave, leaving his helpless widow and innocent orphans to struggle with the hardships that are inevitably in store for them in the best manner they can; whereas the workman who works only for a reasonable number of hours during the day comes to his labor in the morning fresh and strong, his energies recuperated by a night's refreshing sleep, his intellect clear, his mind active, his muscles hard and strong as iron bands, fit to tackle any amount of work. It is thus easy to perceive that overtime is expensive to the employers, it does not expedite the work, and is demoralizing and injurious to the workmen.

The year 1890 has been a very peaceful one with us; in fact, we have not had any disputes of any magnitude. New demands upon our employers have been of a trivial character and very few. No general advance has been solicited during the past year, and work has been steady, continuous, and profitable to our members.

When we take into account the fact that fully 90 per cent. of our members are always engaged on piecework, and that there are continual changes going on which necessitate re-

adjustments of prices and cause stoppages of work—these are all classed as disputes, and the members who lose time through them receive dispute benefits from the society's funds, and a very accurate account is kept by us of such expenditure and shown in this and in our annual and quarterly reports—the wonder is that the amount so spent is not larger. The disputes before mentioned are really not ruptures between ourselves and our employers, but simply the expenditure caused by the delay in getting the prices for doing the work settled upon.

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FINANCE.

Turning now to the society's present position, and comparing it with the close of 1889, we find that at that date we had 227 branches; we now have 238, being an increase of 11. Our number of members at the end of 1889 was 33,441; the number now reaches 35,860. We have thus added 2,419 to our muster roll during the year.

Our young men should realize the fact that our fathers fought and struggled against great odds and under most adverse conditions to make and perpetuate the noble institution which to-day we reap the benefit of. Such being the fact, it should be a point of honor on their part to steadfastly uphold the society to which they owe nearly all the advantages they now possess in the shape of fair wages, the 9 hours for a day's work, and the Saturday half-holiday. We can only hope to retain these privileges and still make further progress by adhering to our union principles in the future.

Our total income for last year is the largest ever reached, namely, £119,646 4*s.* 6½*d.*, being an increase on the previous year of £15,123 6*s.* 10½*d.* The amount received as income, with the balance in hand at the end of 1889, brings the total up to £220,542 10*s.* 2*d.*, and our expenditure has been £71,688 18*s.* 0½*d.*, leaving a balance in hand at the end of the year of £148,853 12*s.* 1½*d.* To show the great progress we have made during 3 years, I may mention that at the close of 1887 we numbered 24,860 members and had a balance in hand at that date of £25,001 5*s.* 2*d.* Compare these figures with those above given; they show that we have increased our members by 11,000 and our funds by £123,852 7*s.*

Our great source of income is from contributions, and we have received under this heading during the year no less a sum than £94,546 7*s.* 3*d.*, being £6,222 8*d.* in excess of the previous year.

The 10*s.* per member extra levy which you so unanimously consented to pay during the year has produced £13,767 15*s.* 6*d.* This shows your great attachment to the society and speaks volumes for your faithfulness.

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In turning to the expenditure side of the accounts we find them equally satisfactory. Payments to our sick members during the year amount to £18,342 14*s.* 4*d.* This is in excess of the previous year by £3,245 8*s.* 2*d.* The epidemic of influenza, which visited the United Kingdom the early part of last year, is somewhat responsible for this, as our February report shows that during 1 month the number of members on our sick fund went up from 870 to 1,336.

We have paid the sum of £11,344 6*s.* 2*d.* as out-of-work benefit. This is an increase of £7,857 14*s.* 5*d.* compared with the previous year, and at once proves that the pressure of work has not been so great.

Our benevolent fund has rendered help to those who have needed it to the amount of £2,711 1*s.* We had a balance of £118 12*s.* 8*d.* in favor of this fund at the end of last year, and the income during 1890 is £2,363 13*s.*, making a total of £2,482 5*s.* 8*d.* There was therefore a deficiency at the end of the year of £228 15*s.* 4*d.* Our benevolent fund is intended to render special assistance to widows and orphans and to give relief to members in circumstances of exceptional distress. These grants are made in addition to the ordinary benefits. As a rule, the fund can not be said to be imposed upon, each application being minutely inquired into, and applications seldom being made without good cause.

There have been several aged members put on the superannuation fund during the year, and several have reached their journey's end and therefore require no further benefits, thus

leaving the number on the fund very much the same as the previous year. Amount paid for this benefit during 1889, £5,017 15*s.*; and during 1890, £5,082.

Funeral benefit has called for a larger sum, and rose to £4,609, or £616 more than the previous year.

The amount spent in disputes is small, namely, £1,265 16*s.* 6*d.*, being a fraction more than 1 per cent. of our income. Strikes are a most unsatisfactory method for adjusting labor disputes.

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We have added £10,000 to our reserve fund since the commencement of the present year, bringing the total up to £51,000, and I hope it may never be less.

During the year under review we have been able to bring about a federation of the engineering and shipbuilding trades of the United Kingdom. This federation is composed of 13 societies at the present time, and others are making application to join. We hope this closer tie of the different societies will give us a power and influence we did not previously possess. The object of the federation is not of an aggressive nature, but for defensive purposes, and the protection of rights already acquired, and to promote arbitration or conciliation in trade disputes, and the elevation of labor generally.

Another subject of great importance, and one that our members should not lose sight of, is the necessity there is for the individual member to take an active interest in the everyday work of his own branch. Many men run away with the idea that they have simply to pay their contributions, and that completes the obligations resting upon them as members. Now, this is a great mistake, and is a source of much evil to our well-being. The business of the branch is often left in the hands of a few members, the consequence being that things frequently go wrong through the apathy of the bulk of the members. Many a good officer and well-intentioned man has fallen into error from this evil. The object desired is that every member should take a lively interest in seeing the rules strictly carried out. Do not be afraid to speak if you see any irregularities existing, but always act at the right time and speak in the right manner, should you be certain the rules are evaded. The main thing to do is to elect the best men you can find as your officers; having done so, then support them to the full extent of your power by attending the meetings; give them all the sympathy and help you possibly can, and, when it is found that they are doing all that is possible to further the interests of the society, give them every encouragement by showing that you appreciate their efforts. The work of our branch officers is very arduous and very heavy in large branches; those only who have been through the position can understand its nature, especially the secretaries. It takes nearly all their spare time to keep things straight; they are frequently compelled to work when others are asleep or enjoying themselves, free from all care. Officers who conscientiously do their work are worthy of the greatest respect and deserve the fullest support that can be extended to them; instead of the same being accorded to them, very often abuse and ill treatment are the wages they receive, although we have reason to believe that this is the exception and not the rule.

What we want in our society, and the world wants, is the best men to lead it forward. Ours is not a machine-made society, in which one man is as good as another, and no man is better than another; this is unnatural and impossible. We, as a society, have done much to remove all restrictions, so that everyone may have a fair start and the opportunity to show what he is made of. At present every man has not this opportunity. How can the docker, whose whole energy of thought is concentrated on the problem whether he shall get a meal to-day, or the sweater, who is kept stitching at shoddy coats for 16 hours a day? But we do look forward to the good time coming when

> Man to man the whole world o'er,
> Shall brithers be and a' that—

when the poorest and meanest shall be given the power, if he has the will, to elevate himself; in that time we shall have social justice, but we shall not have equality. The man of brains, of industry, of self-denial, will rise to the highest ranks in the social hierarchy; the

man whose thoughts are wholly absorbed on the half crown he has got on the next horse race, whose ideal of enjoyment does not rise higher than the bar counter, who is always late at his work and indulges in frequent days off, will sink to the bottom and consider himself a social martyr. He will not receive nor deserve pity, but we must never confuse with him the man and the woman who have the will, if they were only given the opportunity, to raise themselves.

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RULES OF THE FEDERATION OF ENGINEERING AND SHIPBUILDING TRADES OF THE UNITED KINGDOM.*

[Inclosure 2 in Consul Sherman's report.]

OBJECT OF FEDERATION.

The object of the federation shall be to maintain the right of combination of labor by trades-unionism, by mutually supporting any of the societies within the federation if individually attacked by employers or bodies of employers, to use every legitimate means to abolish the character note system, to promote arbitration or conciliation in trade disputes, and the elevation of labor in general.

PROCEDURE.

That the federation be of a mutual character, and no financial responsibilities attach to any society other than the claims of its own members or the limited expenses for working the federation.

If a dispute takes place between any society connected with this federation and their employer or employers, the other societies connected not to interfere, unless nonsociety men are brought in to take the places of the men in dispute or other unfair means used to crush the society affected. In such cases the matter shall at first be submitted to the executive council of this federation by the executive of the society whose members are on dispute. The federation council shall do their utmost to effect a settlement, and, if they fail, they shall, if necessary, submit the whole question to a conference of the representatives from the societies forming the federation, who shall have the power to take what steps they may think best in the matter, the conference not to be called together to consider any dispute unless requested by the executive of the society or societies affected.

Whenever any dispute exists between an employer or employers and any society belonging to this federation, no member or members composing the societies forming this federation shall do any work of the men on dispute.

If any dispute takes place between any of the societies forming this federation, unless amicably settled, such dispute shall be referred to a court of arbitration selected by the parties affected by the dispute. When a court of arbitration is required, each party to the dispute shall appoint one or two arbitrators, the two or four arbitrators to appoint an umpire, all of whom must be trades-unionists; failing the arbitrators to agree, his decision shall be final and binding; court, when formed, to decide as to place of meeting, method of procedure, etc.; each party to pay half of the expenses, unless otherwise ordered by the court.

GENERAL MEETINGS.

A general meeting of representatives shall be called at any time on a requisition being made by the executives of any four societies connected with the federation, such requisition to be sent to the secretary in writing, and the reasons set forth as to the need of such a meeting being held.

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*Composed of the following societies: Boiler-makers and Iron-Ship Builders; Steam-engine Makers; Iron Founders of England, Ireland, and Wales; Associated Molders of Scotland, Associated Blacksmiths; Co-operative Smiths, Newcastle; General Union of Carpenters and Joiners, Associated Shipwrights; Metal Planers, Slotters, and Borers; United Machine Workers, United Pattern-makers, National United Trade Society of Engineers, and United Operative Plumbers of Great Britain and Ireland.

The representatives to general meetings shall be not more than two from each society, and the subscriptions shall be £3 from each society, to meet the expenses that may arise previous to the annual meeting in May next. Future subscriptions shall be decided at annual meetings hereafter.

Any society can withdraw from this federation by giving 6 months' notice, in writing, to the secretary of the federation.

OFFICERS.

The officers of the federation shall be a chairman, vice chairman, treasurer, and secretary, who, with one representative from each of the remaining societies, shall form an executive council, all to be elected at the annual meeting in May each year.

The officers of the federation shall be elected at this conference, and in future at the annual meeting to be held in the month of May each year on such date as arranged by the executive council, the first annual meeting to be held in Manchester and future places of meeting to be decided upon hereafter.

EXECUTIVE MEETINGS.

The chairman and secretary shall have power to call a meeting of the executive council whenever they may deem it needful, such meeting to be held in any town or place that they may consider suitable. Such meeting of executive shall use their judgment as to the need of calling a general meeting of representatives and lay before them their opinions or recommendations.

These rules may be altered, amended, or added to by a majority of votes at an annual meeting of representatives. Any society or societies whose executives may have any suggested alterations or amendments to make shall give 3 months' notice, in writing, to the secretary, and a copy of the same shall be appended to the notice paper calling the annual meeting.

THE WORKMEN'S COMMITTEE.

REPORT BY CONSUL HAWES, OF REICHENBERG.

In these days of industrial disturbances, be the cause whatever it may, it is well worth while to study any institution having for its object the settlement of differences between employer and employé peacefully and with the least possible interference of business.

I therefore feel justified in calling attention to an industrial institution which has of late years largely awakened the interest of German economists, namely, the Workmen's Committee. This has developed here and there spontaneously, but has already rendered excellent service in encouraging and securing peace. It is more than an auxiliary institution of the employer, for, while called into being by the interests of the workman, its statutes yet deal more with his duties than with his rights.

Where a factory and industrial *Krankenkasse*, or sick fund, existed—and their number in 1886 was not less than 5,615 in large establishments in Germany—the law of June 15, 1883, provided for a board of directors drawn from the workmen, which constituted a confidential committee between the employer and employé, where, in addition to the sick fund, special encouragement or loan funds existed; where savings and premium banks, mutual beneficial associations, or other eleemosynary institutions, such

as bath or soup houses, were to be found, it was desirable to have a committee of workmen in the management of such institutions.

With such motives manufacturers in Germany for 25 years have created such bodies as "Factory Counselors," "Oldest Colleagues," "Workman's Committees," etc., as a medium between employer and employé. Members were elected by their comrades, and the fact that he also had some interest in the undertaking soon rendered the employer an earnest worker.

In the iron works at Marienwerder, near Kotzenau, where such a committee has existed since 1872, the director at first had on the committee only such workmen as shared his confidence. At a new election, however, the opposition conquered, and shortly the director found himself working with the new members quite as amicably as with the old.

This representation of workmen in the business is the best means of interesting them in such business and of developing a feeling of participation therein, as well as of modifying an opposition of interests.

Such committees soon exercised the functions of disciplinary authorities, being confidential mediums between both parties, and, being composed of foremen or inspectors, were well adapted to pronounce upon technical matters. They even developed themselves in a high degree as authorities on morals.

The director of the large Isenburg-Wächtersbach crockery factory at Schlierbach (Cassel) wrote, in 1889:

> I have transferred all important disciplinary cases to the Oldest Colleagues. The mutual spirit, as well as honor, of the trade will thereby be visibly developed. Faults are generally more severely punished by this committee than would have been the case had I inflicted the penalty.

This institution extends even to the private life of the working people; it develops the ambition and honor of all the employés. Drunkenness, carelessness, concubinage, quarrelsomeness, as well as wasting of money, are treated by warning and punishment; it excludes those who do not improve or who relapse into bad behavior; it controls the visiting of restaurants by young people, etc.; it discusses with parents the best way of saving money, and even can compel young men to save; it also discusses matters as to residences, etc.

The development of such committees has been due to various practical causes. This development and the acquisition of their higher functions has been so gradual as scarcely to be perceptible.

Committees of workmen were created during the great riots of 1889 and 1890 for the purpose of avoiding quarrels.

Professor Sering, of Berlin, who, as well as Oechehauser, Boehnert, Hitze, and Schmoller, took the part of these bodies, divides such committees in parties and sees whether they are competent to work as mediums between the laborers and the manufacturer, at the same time being the administrators of the eleemosynary institutions or the deciding and executing authorities of administration.

A Belgian manufacturer wrote to the Society of Social Politics as follows:

By listening to the free and uncontrolled conversation and change of opinion of our workmen in our Workmen's Casino I have often obtained good ideas; I have developed a mutual confidence and a feeling of mutual interest, and I think that such a businesslike but friendly tone between employer and employé is just as important as, and, perhaps, for the development of social peace, more useful than, the local or district workmen's committee, where it is an easy thing for the agitators to get the best of the working people and to create discord.

The committee receives complaints, wishes, opinions, and new ideas concerning work; on the other hand, it explains the views and reasons of the employer and seeks to create an understanding between both parties by public speeches and answers.

The managers and the working people are brought closer together by regular discussion and the expression of various opinions. Employers who have created such committees say that many good things for the benefit of the factory have been suggested and furthered by the active help of working people, and that the work of such people, who are pleased to see that their judgment and help will be considered, is, in large establishments, far more satisfactory and agreeable.

It is well to compare especially the report of Director Berding, of the mechanical weaving establishment at Singen, of which Sering remarks that the constitution of a large establishment where such committees exist can not be understood by those who consider the establishment only in its business relation between capitalist and laborer. This relates more to the second kind of committee, which also inspects the eleemosynary institutions of the undertaking. The success in this regard has been excellent. Mr. Berding remarks:

It is obvious to everybody who has the opportunity to look closer into the life of the working people that they appreciate and prefer any institution which they know has been created by their aid and where their ideas have been considered than when such an institution is dictated to them.

Therefore, where the elected committee of workmen is not only connected with the administration of the charitable institutions, but also with the establishment itself, the most pleasant results are to be seen.

The committees have, under the most different economical and social conditions, allayed quarrels and hate and caused mutual understanding and peaceful work between employer and employé, without weakening the technical and economical competency of the undertaking, but, on the contrary, strengthening it.

The technical management of the production and the commercial management of purchases and sales are, of course, decided by the proprietor, but all orders concerning the work and its execution are left to the committee. Questions of wages and length of working time are rarely discussed in these committees.

In Switzerland, Holland, and France are a few such bodies, which have also examples in Austria. In the factory of Ringhoffer, at Prague, the system

is highly developed; it is also working in the Semmering Machine and Wagon Factory, in the factories at Ellisen, in the establishment of Roeder & Co., in Theresienthal, Ulmersdorf, and other places.

JNO. B. HAWES,
Consul.

UNITED STATES CONSULATE,
Reichenberg, April 24, 1891.

THE ZONE FREIGHT SYSTEM.

REPORT BY CONSUL HAWES, OF REICHENBERG.

The success of the so-called zone system for passenger traffic on railways has been practically demonstrated in spite of the arguments of the theoretic economists proving that it was impossible. It was Hungary, I believe, which thus set figures at defiance and showed that the old adage was not always true, and that figures do sometimes lie.

It is now proposed to extend the same system to freights upon the Austrian Government railways, and the general manager of the Austrian Government railways publishes the following explanation of the system which has been adopted after long and thorough conferences between the minister of commerce and the treasury.

The sketch of the tariff which awaits the approval of the board of railways, as well as the ministry of commerce, is as follows:

The tariff is based on a division of the country into zones of 10 kilometres in width, and the rate of freight to the center of a given zone is that of the whole zone, *i. e.*, it costs no more to ship goods to the further border of such a zone than to the middle of it. Rates are fixed by tables for from 1 to 50 kilometres, from 51 to 150 kilometres, from 151 to 300 kilometres, and for more than 300 kilometres.

The present system of classifying the value of the goods, which is the same for Austrian as for Hungarian railways, will in general be continued; but certain important modifications will be made.

The tariff for express goods per 100 kilogrammes is as follows:

Distance.	Ordinary.			Reduced.		
	Under 5,000 kilos.	5,000 kilos.	10,000 kilos.	Under 5,000 kilos.	5,000 kilos.	10,000 kilos.
	Kreutzers.	*Kreutzers.*	*Kreutzers.*	*Kreutzers.*	*Kreutzers.*	*Kreutzers.*
1 to 50 kilometres	1.20	0.90	0.80	0.60	0.50	0.45
51 to 150 kilometres	1.16	.80	.70	.58	.46	.40
151 to 300 kilometres	1.12	.70	.60	.56	.42	.35
Over 300 kilometres	1.00	.52	.46	.50	.30	.26

The present tariff for express goods is divided as follows:

(1) General, 1.60 kreutzers per 100 kilogrammes for 1 kilometre.

(2) Reduced and especially reduced, 0.59 kreutzers per 100 kilogrammes for 1 kilometre.

The new tariff is divided as follows: Under 5,000, over 5,000, and over 10,000 kilogrammes, and contains six divisions. In other words, the arrangement for half and whole carloads has been provided, also, for express goods. The single express package will also be carried much cheaper than before. With ordinary express goods the highest tariff of the future will be 1.20 kreutzers for the given quantity. The lowest tariff, however, falls to 0.46 kreutzer; but will be somewhat dearer, it is true, as not each kilometre, but the distance to the middle of the zone, is taken into consideration. With reduced express goods the tariff falls to 0.26 kreutzer.

The following table compares the present rates per 100 kilogrammes for express goods with those of the future:

Distance.	General.				Reduced.			
	Present tariff.	Future tariff.	Half car.	Whole car.	Present tariff.	Future tariff.	Half car.	Whole car.
	Kr.	*Kr.*	*Kr.*	*Kr.*	*Kr.*	*Kr.*	*Kr.*	*Kr.*
5 kilometres	23	16	14	12	9	8	7	7
15 kilometres	34	24	20	18	13	12	11	10
25 kilometres	50	36	28	26	19	18	16	14
45 kilometres	82	60	52	42	31	30	26	23
55 kilometres	98	72	56	50	37	36	30	28
75 kilometres	130	96	72	64	48	48	40	36
95 kilometres	162	120	90	80	60	60	50	45
125 kilometres	210	156	114	100	78	78	64	57
155 kilometres	258	190	136	122	96	95	77	68
175 kilometres	290	212	150	134	107	106	86	75
225 kilometres	370	268	186	164	137	134	107	93
275 kilometres	450	324	220	194	166	162	128	110
325 kilometres	530	378	252	220	196	189	146	126
375 kilometres	610	428	278	242	225	214	161	139
425 kilometres	690	478	304	266	255	239	176	152
475 kilometres	770	528	330	288	284	264	191	165
625 kilometres	1,010	678	408	358	373	339	236	204
725 kilometres	1,170	778	460	404	432	389	266	230
825 kilometres	1,330	878	512	450	491	439	296	256
925 kilometres	1,490	978	564	496	550	489	326	282
1,025 kilometres	1,650	1,078	608	542	609	539	356	308

For ordinary express freight, whether in single parcels or carloads, the rates will be reduced between 30 and 60 per cent. For reduced express goods it costs at present to send 100 kilogrammes from Vienna to Braunau 2.25 florins, while in future it will cost for a single parcel 2.14 florins, or for a carload 1.61 and 1.39 florins, per 100 kilometres. Here the reduction is less than for ordinary express goods.

The chief difficulty of the reform lies in the "ordinary" express, wherein the introduction of carloads for transportation of goods into the great towns will be particularly favored.

The tariff for freight goods per 100 kilogrammes for 1 kilometre is as follows:

Distance.	Single pieces.				Carloads.		
	Class I.	Class II.	Exceptional, IV.		5,000 kilos., A.	10,000 kilos.	
			5,000 kilos.	10,000 kilos.		B.	C.
	Kr.	*Kr.*	*Kr.*	*Kr.*	*Kr.*	*Kr.*	*Kr.*
1 to 50 kilometers	0.60	0.50	0.45	0.40	0.34	0.24	0.18
51 to 150 kilometres	.58	.46	.40	.35	.29	.22	.15
151 to 300 kilometres	.56	.42	.35	.30	.25	.18	.12
More than 300 kilometres	.50	.30	.26	.23	.20	.12	.10

The most important change which is seen here is the creation of an exceptional class for piece freight of 5,000 and 10,000 kilogrammes. With piece freights, as with express goods, the rates are divided into carloads and half loads. For carloads the rates are especially low, often less than half the rates for single piece freights.

This tariff is intended to greatly encourage trade between great cities, as only in large towns are goods collected. Less important are the reductions in classes A, B, and C.

In the tariff for staple articles are new exceptional rates for cumbersome goods which deal with the space occupied, and is reckoned upon the number of square metres of floor occupied.

Special and exceptional tariff.

Distance.	Carloads.						
	Special tariff.				Exceptional tariff.		
	1.	2.	3 (exceptional tariff).		*a.*	*b.*	*c.*
			I.	II.	Class special tariff.*		
					B.	C.	3.
	Kr.	*Kr.*	*Kr.*	*Kr.*	*Kr.*	*Kr.*	*Kr.*
1 to 50 kilometres	0.26	0.18	0.15	0.12	1.30	1.00	0.80
51 to 150 kilometres	.23	.15	.13	.10	1.20	.80	.70
151 to 300 kilometres	.19	.12	.10	.09	1.00	.70	.55
More than 300 kilometres	.15	.10	.08	.08	.65	.55	.45

* Per square metre of surface occupied.

The coal tariff is included in the exceptional tariff 1. The previous exceptional tariff had the rates 0.22, 0.14, 0.12, and 0.08 kreutzer per 100 kilogrammes for 1 kilometre. Here, therefore, is no special reduction.

The exceptional tariff II is, however, lower, and, what is quite new, will include every article which, on account of its little value or for other reasons, can only pay low freight, as lignite coal, building materials, ice and snow, sugar-beet refuse, etc.

Fees for handling freight will, in future, be reckoned as follows: For transportation from 1 to 30 kilometres in class I and II; further, the delivery of piece freights in whole or half carloads (exceptional tariff IV), as well as in carloads, class A, 3 kreutzers. Exactly the same amount for the same item of the tariff must be paid for transportation up to 80 kilometres, and over 80 kilometres the fee for handling amounts to 4 kreutzers. The unit in every case is 100 kilogrammes.

Under the same conditions car classes B and C, and by special tariff 1, 2, and 3, must pay 2, 3, and 4 kreutzers per 100 kilogrammes, and, by the exceptional tariff II, 2 kreutzers, without regard to the distance.

JNO. B. HAWES,
Consul.

UNITED STATES CONSULATE,
Reichenberg, April 11, 1891.

DUTY REDUCTIONS IN DENMARK.

REPORT BY CONSUL-GENERAL CARR, OF COPENHAGEN.

In consequence of the system of raising revenue by a tax on the manufacture of beer, there was an act passed at the late session of the Rigsdag reducing the duties on the importation of sugar, chocolate, and petroleum, the reductions to take effect on the 1st of October, 1891, when the beer tax law goes into effect.

The duties on sugar, heretofore—according to the quality—4⅔, 8½, 9¼, and 13½ öre per pound, are reduced to 1, 2, 3, and 6 öre per pound.

The duties on chocolate, heretofore 14½ öre per pound, are reduced to 10½ öre per pound.

The duties on petroleum, heretofore 4 öre per pound, are reduced to 2 öre per pound.

The tax on the domestic manufacture of beet-root sugar, heretofore 8½ öre per pound, is reduced to 2¼ öre per pound.

A bounty to the amount of the duties on the importation of sugar used in their manufacture is to be paid on conserves made in, and exported from, Denmark.

CLARK E. CARR,
Consul-General.

UNITED STATES CONSULATE-GENERAL,
Copenhagen, April 5, 1891.

THE SILK INDUSTRY OF FRANCE.

REPORT BY CONSULAR CLERK HANSMANN, OF LYONS.

HISTORY OF THE INDUSTRY.

Although France has for nearly two centuries been the leading silk-manufacturing nation of Europe, the industry is by no means of ancient date. It can not be stated with exactness at what date silk-weaving was begun in France. Various old records show that in the twelfth and thirteenth centuries there were some weavers of ribbons and galloons in different localities, and that in the fourteenth and fifteenth centuries some few scattered looms for silk cloth and velvet were operated at Paris, Rouen, Lyons, Nîmes, and Avignon. The weavers were usually Italian refugees from Lucca and Florence, who had expatriated themselves to escape the ravages of civil war at home.

The first important steps looking to the establishment of a regular silk industry in France were taken by Louis XI, who in 1466 succeeded in inducing a number of Italian weavers to locate at Lyons; however, the bankers and importers of Italian silks at Lyons, believing the establishment of silk-weaving in their midst prejudicial to their business, manifested such hostility to the new enterprise that in 1470 the King found it expedient to remove these weavers to Tours.

It was not until the sixteenth century that silk-weaving was successfully introduced on an extended scale. At this time considerable quantities of cloth of gold, velvet, and satin were purchased from the Italian manufacturers, causing a large annual flow of money towards the Italian silk centers. It was primarily the desire of keeping this money within the Kingdom that prompted Francis I to recur to extraordinary measures for the introduction of silk-weaving in France. By an edict of December 2, 1536, he offered great inducements to silk-weavers who would settle in France, guarantying them immunity of imprisonment for debt, exemption from taxation, free lodgings, and the right to carry swords—the latter a privilege rarely granted to persons not of noble birth. These brilliant offers soon attracted considerable numbers of Italian weavers, who continued in France the weaving of those articles they had so justly made famous at Genoa, Florence, Lucca, and Venice.

Lyons was then the principal center of the trade with Italy, especially for the importation of silk goods, and on the introduction of silk-weaving in France it at once became the headquarters of the new industry. Its geographical position rendered its fairs a great rendezvous for the merchants of surrounding countries, and a law requiring every bale of raw silk entering France to pass the Lyons customs station soon made this city an important raw-silk market.

Silk-weaving was begun at Nîmes and Paris soon after it had gained a footing at Lyons, and was likewise introduced about the same time by the

popes at Avignon. By the end of the sixteenth century the new industry had become so important that Colbert established special regulations governing silk-weaving in its four leading centers—Lyons, Tours, Paris, and Nîmes.

The seventeenth century was, generally speaking, one of great prosperity for the silk industry up to October 22, 1685, the date of the revocation of the edict of Nantes. This measure, which so sadly deranged French economic matters and drove over 300,000 of the most skilled and industrious French artisans out of the country, seemed for a time to have annihilated the silk industry. The number of looms in all of France was reduced from 40,000 to less than 10,000. The weavers, expelled from their own country, took refuge for the most part in England, Germany, and Switzerland and continued their industry at Macclesfield, Crefeld, Elberfeld, Zurich, and other places. England and Germany, from being among the best customers of France, thus suddenly became her most formidable competitors.

The silk industry was, however, too firmly established in France to be uprooted even by such a calamity as the expulsion of Protestant weavers. After 15 or 20 years of complete depression, a reaction began to set in, and lost ground was soon recovered. Favored by various circumstances, the French silk industry now began to take the lead, gradually eclipsing even Italy and attaining to that predominant position in the markets of the world which it has ever since maintained.

Being founded by Italian weavers, it is not surprising that the French silk industry should have confined itself at first to making the rich Italian articles, such as damask of Venice and Lucca, brocaded velvets of Genoa, cloth of gold, etc. But little by little it began to emancipate itself from Italian traditions. First, lighter all-silk fabrics began to be made, then followed silk-and-wool-mixed fabrics in considerable variety. As lighter articles were produced, silks gained in favor with the middle classes, thus rendering it all the more necessary to provide articles suitable to their needs and state of life. It was by making articles suitable for the middle classes that French manufacturers succeeded in attracting the attention of foreign buyers. Greater security of roads and better means of communication also tended to divert the stream of buyers from Italy to the then renowned fairs of Paris, Lyons, Tours, and Beaucaire.

Various circumstances contributed toward making France the center of the raw-silk trade. The Cape of Good Hope route to India and eastern Asia superseded, to a great degree, the old overland route and Mediterranean passage. This caused the Asiatic raw-silk trade to pass from the hands of the Venetian and Genoese to those of the Dutch and English, and made of Marseilles, Amsterdam, and London the leading raw-silk marts. Italy gradually came to look to Lyons as the purchaser of its overflow of raw silk. Spain found the fairs of Beaucaire to be the best selling market for the raw silks of Valencia and Murcia. Finally silk-growing made rapid headway in France, especially in the region of the Cévennes, and French silk-raisers found Lyons a ready market for their productions.

Perhaps the most important factor in securing to the French silk industry its unrivaled prestige consists in the fact that since the middle of the seventeenth century Paris has been the center of the arts and fashions of Europe. It is to Paris that the merchants of all nations come to acquaint themselves with the new fabrics, designs, novelties, styles, and everything relating to the domain of fashions, and an article or style once fairly launched at Paris is almost certain of success the world over.

It was the eighteenth century that saw France eclipse Italy in the silk world and assume the rôle of leader. This victory was obtained after a prolonged struggle, and was the triumph of newer and brighter ideas, of greater activity and diversity, and of more perfect means of intercourse and of production. To hold this position for two centuries, in the face of the most powerful and multitudinous competitors, has required the most untiring efforts on the part of the manufacturers for the perfection of machinery and processes of production for developing the greatest degree of technical skill among the workmen, and especially for continuing to lead the world in the production of novelties, the tasteful design and faultless execution of which at once mark them as veritable works of art.

CENTERS OF THE INDUSTRY.

The geographical location of silk-weaving in France has undergone considerable changes since the introduction of the industry. Cities in which silk-weaving was formerly of great importance have turned their attention towards other industries, while new silk centers have sprung up and attained more or less prosperity.

Rouen.—In the fifteenth century Rouen contained some silk looms, but the weaving of silk has long been discontinued there. The same is true of Orleans.

Avignon.—The silk manufacture established by the popes at Avignon was for a long time in a flourishing condition, and its brocades, damasks, and brocatelles were admired and sought for far and wide. In 1715 the height of prosperity was reached with 5,000 looms in operation and a total production valued at 15,000,000 francs. When the popes lost control of Avignon the city began to decline; its weavers emigrated, some to Nîmes, some to Lyons. At present only a few looms are to be found at Avignon, and these are generally engaged on plain, cheap goods for the account of Lyons houses.

Tours.—Tours was the first great silk-weaving center of France. Under the direction of the Italian weavers introduced by Louis XI in 1470 a considerable degree of prosperity was soon attained. Before the revocation of the edict of Nantes the number of looms in operation had reached 8,000. This prosperous industry was completely destroyed by the fatal measure. During the latter part of the eighteenth century Tours revived to a certain extent, and the number of looms once more reached 2,000. Since 60 years ago the Tours silk industry has been going backwards again, and at present

employs but 1,000 looms with an annual production of perhaps 6,000,000 francs.

Nîmes.—This city was likewise one of the early centers of silk-weaving. It was the home of a large number of Italian refugees and suffered much less than the other silk centers from the expulsion of Protestant weavers. The eighteenth century was one of great prosperity for Nîmes, the number of looms reaching 3,000 for broad goods and 8,000 for silk knit goods. The present century brought with it a lessened demand for Nîmes knit goods, and even the broad goods industry saw its trading territory gradually narrowed down to the immediate vicinity. The number of looms at Nîmes and in the Gard department is now estimated at 1,500.

Paris.—Ever since the thirteenth century there has been a small number of looms for silk-weaving at Paris, but not until the present century did their output assume much importance. At present, perhaps, 25,000 looms are employed at Paris and in the adjoining departments in the weaving of silk and silk-mixed goods, principally galloons, fringes, cords, and all other varieties of passementerie and trimmings. The total value of these goods reaches about 70,000,000 francs annually.

Calais.—Nets, tulles, and laces constitute the specialty of Calais. This industry is of comparatively recent date, the first loom having been introduced in 1816 by English smugglers. The real importance of Calais dates from the introduction of figured tulles in 1836. At present the number of looms at Calais and its suburb Saint-Pierre-lès-Calais is about 1,800. The annual production averages about 50,000,000 francs, but is subject to great variations, owing to the fact that whenever the demand for silk nets and laces is low Calais manufacturers at once substitute cotton or wool on their looms to meet the demands of the trade.

Roubaix.—During the latter half of the present century Roubaix has become the center of an extensive industry, manufacturing silk-and-wool and silk-and-cotton mixed goods, principally upholstery goods. These articles, though often lacking originality, find ready sale on account of their low price. The total number of looms in the north of France engaged in making these mixed goods is estimated at 10,000 and their annual production at 20,000,000 francs.

St. Chamond.—Silk-weaving has been established in St. Chamond, in a modest way, ever since the thirteenth century. During the sixteenth century Bolognese refugees introduced silk-throwing, which, together with ribbon-weaving, attained considerable importance. These industries were badly crippled by the revocation of the edict of Nantes. The number of throwsters fell from 150 to 50, while weaving was entirely discontinued. This period of depression lasted until the beginning of the present century, when the introduction of braid-weaving brought with it a general revival. By confining their attention to braids and similar articles, St. Chamond manufacturers advanced their specialties to a degree of excellence that has established for them a world-wide reputation. The present annual production is valued at 15,000,000 francs, of which three-fourths is exported.

St. Etienne.—The weaving of ribbons is less ancient at St. Etienne than at St. Chamond, having been established about the beginning of the seventeenth century. The number of persons employed in the ribbon industry had attained 4,500 before the revocation of the edict of Nantes, but was reduced to almost nothing by this calamitous measure. The introduction in 1760 of the loom permitting the weaving of several pieces of ribbon at a time instilled new life into the ribbon industry. By the end of the eighteenth century the number of looms had risen to 6,000 and in 1850 to 30,000. Since then a considerable rearrangement of the means of production has become necessary, partly on account of the introduction of power looms, partly in order to economize expenses so as to meet the increased foreign competition. Looms have been transported to the country and aggregated in large factories. The number of power looms has reached 3,000, and the isolated hand looms still owned by the weavers are only employed on goods requiring the greatest degree of care and skill.

The value of the ribbon manufactured by St. Etienne is subject to great variations, as the demand for ribbons is quite fickle. In recent years the output has averaged 100,000,000 francs, of which about one-third is exported. Formerly a much greater proportion was exported, but cheaper wages have enabled Basle and Barmen to undersell St. Etienne in plain and cheap ribbons. St. Etienne, however, holds its time-honored superiority in figured goods and high novelties; in fact, in all articles where artistic taste and skill in designing and executing enter as a factor.

Lyons.—Lyons is by far the most important silk center, not only of France, but of Europe as well. Its geographical position and its four annual fairs early attracted a good number of Italian merchants, who established banks and engaged in the importation and sale of Italian silk goods.

During the fourteenth and fifteenth centuries there were a few isolated looms in Lyons, but silk-weaving did not become an industry of importance until the arrival of numbers of Italian weavers, attracted by the privileges extended them by Francis I. In 1542 the total number of persons employed in the silk industry was already 12,500.

The seventeenth century was one of great prosperity for Lyons. Many important improvements were made in the processes of weaving, dyeing, and finishing, and many new articles were produced. At the time of the revocation of the edict of Nantes (1685) Lyons possessed 10,000 looms for broad goods and 8,000 looms for ribbons and galloons. Within a few years all but 2,500 of these were driven out of the country. For 15 or 20 years the Lyons silk industry seemed annihilated. With the beginning of the eighteenth century great efforts were made under the direction of the chamber of commerce to restore the former prosperity. Inventive genius of all kinds and in all lines was encouraged. New designs and new goods were brought forth. Soon a veritable renaissance was witnessed, and the eighteenth century became, perhaps, the most brilliant in the history of Lyons for the production of the richest grade of goods. Their superiority in artistic taste and

execution soon enabled the Lyonese to reconquer the markets of the world. The number of looms, which was 9,000 in 1750, had risen to 18,000 in 1789. Then came the revolution. Lyons did not sympathize with the ultraradical movements, and therefore incurred the hostility of the convention. The city was attacked, and, after a brave resistance, captured and sacked by a revolutionary army. Its industries were, for the time being, completely ruined, and the nineteenth century was begun with but 3,000 looms.

The revolution brought about a great change in fashions and customs. Popular taste favored plain, silk-mixed goods, with but slight demand for brocades. Manufacturers, therefore, had to make new articles and devise new means of production.

During the first decade of this century Jacquard's loom came into use. The cost of brocades was greatly diminished. They were brought within the reach of the middle classes, and their consumption was greatly increased. Jacquard's invention acted as a great stimulus to inventive genius, and the power loom may be regarded as its legitimate outgrowth.

In 1850 the number of looms was 60,000. The total production was valued at 250,000,000 francs, of which over 100,000,000 francs were figured goods. Three-fourths of the whole amount was exported.

During the last 40 years the Lyons silk industry has witnessed many important changes. Among these may be cited the persistent efforts of the manufacturers to drive the looms out of the city into the country, to take them out of the control of the individual workmen and mass them in factories, the introduction and perfection of dyeing in the piece, and of new methods of printing and finishing; but, most important of all, the introduction and tremendous expansion of the power loom.

The number of hand looms reached its climax toward the end of the sixties with about 120,000. Now the number is perhaps 80,000, of which over 60,000 are scattered around in the country. The number of power looms, which was but 6,000 in 1873, is now nearly 25,000, almost all of which are in the country around Lyons within a radius of 75 miles. The value of silk-mixed power-loom goods has increased in the same proportion as the number of power looms and is now about 160,000,000 francs per annum.

The total production of the Lyons silk industry averages about 400,000,000 francs per annum. During the years 1867–'72 it was somewhat greater, but this is due to the fact that raw silk was then worth 100 francs per kilogramme, as against 50 to 55 francs now. The quantity of goods produced is now greater than ever before and constitutes two-thirds of the production of France and one-fourth of the total production of the world.

The organization of the Lyons silk industry is very advantageous to the manufacturers. While some of them own their own looms and factories, the great mass of looms belong to the individual workmen or to the master weavers. No contracts of long duration bind employer and employé. As a result, in times of depression manufacturers need never run at a loss and

have none but office expenses to bear. On the other hand, the workmen find it to their interest to do their work as well as they can and to make all possible improvements in methods and machinery. To encourage the latter, the chamber of commerce grants cash prizes to such workmen as make improvements of general interest.

The excellence of Lyons goods is due partially to the fact that every manufacturer, together with the master weavers and workmen depending on him, devotes his entire attention to special lines of goods, and thus attains a degree of perfection which would be quite beyond the reach of a manufacturer attempting to make a number of different articles. The fact that Lyons is the first raw-silk market of the world offers the manufacturer a great variety and choice of raw material.

The great strength of the Lyons industry is to be found in the peculiar aggregation and coöperation of the different branches of manufacturing, in the commercial and technical education of the manufacturers, in the great mass of skilled workmen, in the exquisite taste of the designers, in the perfection of the methods of dyeing, and in the great excellence which the finisher's art has attained.

CONDITION OF THE INDUSTRY.

France consumes about 4,500,000 kilogrammes of raw silk per annum, which may be valued at 250,000,000 to 300,000,000 francs. Adding to this the value of the wool, cotton, and other materials used in mixed fabrics, gives about 400,000,000 francs as the value of the raw materials used by the French silk industry.

Of the raw silk consumed France herself produces but about one-eighth part, the great mass being of Asiatic and Italian origin. In recent years considerable efforts have been made to restore to the French silk-raising its former prosperity, but so far without much success. During the first half of the present century silk-growing was quite prosperous in France. The production, which was 500,000 kilogrammes in 1808, increased steadily until 1849, when it reached 2,000,000 kilogrammes. In 1854 began a series of signal reverses. A ravaging disease attacked the mulberry trees and destroyed whole plantations. Various diseases began spreading among the silkworms and tended to discourage the silk-growers. In 1876 the low-water mark for the century was reached, with a production of but 155,000 kilogrammes. Since then there has been a material improvement, and during the last 10 years the annual production has been from 500,000 to 800,000 kilogrammes.

The total value of the manufactures of silk produced by France is estimated at from 600,000,000 to 650,000,000 francs per annum, the total production of the world being estimated at 1,600,000,000 francs. It will be seen that France produces about two-fifths of the whole amount. The total number of silk looms in France is now estimated at 230,000, as against 30,000 before the revolution.

The exports of French silk goods amount to about 250,000,000 francs per annum. England and the United States are the leading purchasers, taking over two-thirds of the whole amount exported; then follow, in the order named, Germany, Switzerland, Belgium, Spain, Turkey, and Italy. Generally speaking, the volume of exports has been fairly well sustained during the last 30 years, although in some exceptional years the figure reached 350,000,000 francs. In some quarters, however, considerable ground has been lost. Swiss and German competitors have made tremendous strides, and have secured much trade formerly tributary to France. Lower wages permit these countries to undersell France on cheap, plain goods requiring neither taste in designing nor great skill in execution.

The greatest loss to the French silk industry has been occasioned by the establishment and rapid expansion of silk-weaving in the United States. During the years 1870–'73 the United States purchased from 110,000,000 to 130,000,000 francs' worth of French silk goods per annum; now the amount is scarcely half so great, although the consumption of silk goods has greatly increased in the United States. Year after year one line after another of French articles is crowded out of our markets by our own silk industry, and at present we purchase from France only some special lines of goods—articles which we have not yet succeeded in making ourselves. It is safe to say that within a few years we will have ceased buying French silk goods, save high-grade fancy articles and such goods as can only be made on hand looms.

France levies no duty on importations of foreign silk goods. These importations have been growing rapidly of late, reaching the sum of 58,000,000 francs in 1889, furnished by the following countries:

Countries.	Amount.	Countries.	Amount.
	Francs.		*Francs.*
Switzerland	22,000,000	India	2,000,000
China	11,000,000	All other	5,000,000
England	10,000,000	Total	58,000,000
Germany	8,000,000		

Switzerland furnishes light all-silk articles made of Italian silk. This trade has rapidly grown to importance since France began levying a duty on Italian raw silk. England sends a special grade of plushes and some particular lines of fine tie goods. From Germany, mixed goods, especially cheap velvets and plushes, are obtained. China and India contribute those light all-silk articles known as pongees, corahs, and tussahs. These goods are imported in the gray and brought to Lyons to be dyed and printed, and are then generally reëxported to London or New York.

It is not likely that France will be able to expand her silk industry to any considerable extent; but, on the other hand, she will no doubt remain the leading silk-manufacturing nation for many years to come. Certainly no other nation merits so well to be the leader. The industry of no other

nation makes such great endeavors to make well whatever it makes or gives evidence of such an inexhaustible wealth of new and artistic ideas. So long as Paris remains the world's center of arts and fashions, so long France will remain the great producer of fine goods. No other nation could at present think of disputing France's leadership in the realm of the beautiful.

In cheap goods competition has a better chance. However, even here the prospects are hopeful for the French industry. French manufacturers do not try to meet the popular demand for cheap goods by providing coarse or unattractive articles, for, however cheap a French silk fabric may be, it always bears the imprint of that quite exquisite taste which, up to date, no other people can impart to it to that degree.

In conclusion, it may be proper to refer to the great progress which has been made in Japan in late years, and which seems to mark that country as destined to become, at no distant day, the great rival of France in silk-manufacturing.

Table showing country of origin of raw silk conditioned at Lyons from 1885 to 1889, inclusive, with percentage of total contributed by each.

Country.	1885.	1886.	1887.	1888.	1889.
	Per cent.	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*
France	13.93	13.12	13.02	12.8	13.31
Spain	0.32	1.03	1	1.04	0.85
Italy	26.8	25.4	20.75	21.26	19.63
Syria	0.79	6.74	6.35	6.33	9.32
India	3.29	2.08	1.52	1.56	1.51
China	33.38	37.34	42.12	36.57	30.99
Japan	14.49	14.29	15.24	20.44	24.39
Total	100	100	100	100	100

NOTE.—The combined percentages of India, China, and Japan are as follows: 1885, 51.16 per cent.; 1886, 53.71 per cent.; 1887, 58.88 per cent.; 1888, 58.57 per cent.; and 1889, 56.89 per cent.

Table showing the exports of French silk goods by articles from 1880 to 1889, inclusive.

Articles.	1880.	1881.	1882.	1883.	1884.
All silk:	*Francs.*	*Francs.*	*Francs.*	*Francs.*	*Francs.*
Plain	96,371,134	94,889,421	120,887,595	111,045,178	72,744,464
Figured	15,101,092	15,421,568	20,454,774	26,878,560	19,113,720
Mixed:					
With metal	2,382,940	2,008,370	2,994,370	2,929,920	3,072,900
With fibers	64,631,972	67,380,244	68,620,390	69,076,236	65,500,000
Schappe (pure or mixed)	4,406,340	3,787,010	4,202,496	5,482,956	10,644,240
Tulles	6,367,860	14,536,390	18,243,720	38,980,760	25,867,170
Gauzes, crapes	11,007,182	12,300,664	11,827,654	9,749,888	7,789,830
Ribbons	16,573,445	15,082,730	21,980,707	25,290,620	13,077,903
Laces and trimmings	17,415,816	19,675,114	20,346,039	17,800,370	18,993,539
Total	234,257,781	245,081,511	289,547,745	301,234,488	236,803,766

Table showing the exports of French silk goods, etc.—Continued.

Articles.	1885.	1886.	1887.	1888.	1889.
	Francs.	*Francs.*	*Francs.*	*Francs.*	*Francs.*
All silk:					
Plain	75,239,567	91,017,409	83,024,424	87,916,212	82,627,270
Figured	8,488,746	6,404,320	4,497,732	3,886,200	7,565,700
Mixed:					
With metal	2,570,600	1,127,175	852,438	1,567,315	2,951,440
With fibers	51,536,049	62,894,370	50,578,497	57,686,597	61,137,647
Schappe (pure or mixed)	9,818,428	5,889,807	5,137,536	4,005,882	5,061,882
Tulles	30,122,400	19,630,350	19,852,200	17,429,335	21,038,085
Gauzes, crapes	9,152,006	10,620,416	7,188,386	5,925,080	9,593,810
Ribbons	15,861,542	25,532,678	24,040,864	26,241,391	35,638,883
Laces and trimmings	19,054,318	18,310,718	14,655,066	18,513,164	15,634,447
Total	221,843,656	242,027,213	209,807,123	223,171,176	241,249,164

Table showing the exports of French silk goods by countries from 1880 to 1889, inclusive.

Country.	1880.	1881.	1882.	1883.	1884.
	Francs.	*Francs.*	*Francs.*	*Francs.*	*Francs.*
England	98,993,458	104,955,949	138,584,164	120,757,740	100,891,172
United States	71,215,678	70,697,173	84,277,624	89,146,866	61,716,214
Germany	19,369,275	20,745,360	19,620,060	12,427,458	17,705,984
Switzerland	5,483,987	6,839,672	9,465,474	16,762,478	7,494,859
Italy	8,203,171	12,874,288	8,526,089	8,484,107	8,747,733
Belgium	6,962,119	7,534,110	7,972,033	33,821,503	23,269,767
Spain	8,398,961	6,056,415	6,119,674	4,919,357	4,545,620
All other	15,631,132	15,418,544	14,982,627	14,826,379	12,432,417
Total	234,257,781	245,081,511	289,547,745	301,145,888	236,803,766

Country.	1885.	1886.	1887.	1888.	1889.
	Francs.	*Francs.*	*Francs.*	*Francs.*	*Francs.*
England	93,406,554	98,858,151	91,354,404	99,083,231	110,198,309
United States	58,582,210	80,095,197	58,484,001	56,277,478	69,302,190
Germany	16,649,452	11,279,784	13,233,476	16,431,555	19,297,400
Switzerland	7,493,595	10,604,340	9,654,832	10,622,221	10,813,332
Italy	13,090,920	10,219,733	8,832,868	3,382,062	5,127,496
Belgium	17,598,989	11,404,535	11,678,258	9,074,267	9,780,941
Spain	4,514,830	5,470,064	4,063,354	7,693,212	6,320,186
All other	10,507,376	14,095,399	12,305,930	20,670,150	10,409,312
Total	221,843,856	242,027,243	209,807,123	223,171,176	241,249,164

CARL A. HANSMANN,
Consular Clerk.

UNITED STATES CONSULATE,
Lyons, April 18, 1891.

GERMAN MINE PRODUCTS.

TRANSMITTED BY CONSULAR CLERK MURPHY, OF BERLIN.

Table showing the actual production in 1889 of mines, salt works, and smelting establishments in the German Empire, as compared with 1888.

Description.	Quantity.		Value of production.	
	1889.	1888.	1889.	1888.
Products of mines.				
Coal:	*Kilogrammes.*	*Kilogrammes.*	*Marks.*	*Marks.*
Pit	67,342,171,000	65,386,120,000	385,080,000	341,063,000
Brown	17,631,059,000	16,573,963,000	44,349,000	40,896,000
Rock salt	554,591,000	414,557,000	2,255,000	1,816,000
Kainite	324,477,000	318,576,000	4,727,000	4,667,000
Potassic salts	861,273,000	916,759,000	10,406,000	10,248,000
Ore:				
Iron	11,002,187,000	10,664,307,000	46,469,000	39,961,000
Zinc	708,829,000	667,761,000	17,690,000	13,747,000
Lead	169,569,000	161,777,000	17,730,000	16,684,000
Copper	573,290,000	530,956,000	18,199,000	17,319,000
Silver and gold	22,264,000	20,390,000	4,042,000	4,069,000
Evaporated salts.				
Chloride of sodium	492,522,000	496,388,000	11,977,000	10,668,000
Chloride of potash	133,957,000	142,765,000	16,791,000	18,360,000
Glauber's salts	69,101,000	52,203,000	1,660,000	1,332,000
Sulphate of potash	29,709,000	33,412,000	4,926,000	4,973,000
Products of smelting establishments.				
Raw iron of all sorts	4,524,558,000	4,337,121,000	217,371,000	191,320,000
Pig-iron:				
For casting	610,893,000	597,851,000	32,842,000	27,858,000
For preparation of ingot iron	1,965,395,000	1,794,806,000	92,115,000	78,787,000
For preparation of weld iron	1,905,311,000	1,898,125,000	87,976,000	80,100,000
Block zinc	135,974,000	133,224,000	49,335,000	43,624,000
Block lead	100,601,000	96,995,000	25,490,000	24,848,000
Block and disk copper	24,597,000	21,569,000	28,109,000	31,539,000
Silver	403,037	406,603	50,813	51,476
Gold	1,958	1,793	5,466	5,004
Sulphuric products of all sorts	431,258,000	339,938,000	14,192,000	13,525,000
Manufactures of raw iron.				
Cast-iron, second smelting	989,622,000	838,251,000	172,917,000	137,657,000
Weld iron and steel	1,749,962,000	1,644,443,000	233,097,000	198,769,000
Ingot iron and steel	2,095,479,000	1,862,677,000	279,912,000	229,782,000

GEO. H. MURPHY,
Consular Clerk.

UNITED STATES CONSULATE-GENERAL,
Berlin, December 8, 1890.

BEER TAX IN DENMARK.

REPORT BY CONSUL-GENERAL CARR, OF COPENHAGEN.

During the recent session of the Rigsdag an important law was passed laying a tax on the manufacture of beer, to take effect on the 1st day of October, 1891. This law created a great deal of discussion, there having been much diversity of opinion as to the wisdom and propriety of such a law. There has heretofore been no tax upon the manufacture of beer.

A tax was laid upon beer containing 2¼ per cent. of alcohol or more of 10 kroners per tonde (29 gallons), but during the period from October 1, 1891, to October 1, 1895, there is to be collected only 7 kroners per tonde.

The brewing of beer containing more than 6 per cent. of alcohol is prohibited.

Beer must remain stored in the brewery until sold for consumption.

Beer subject to tax must not, outside of the breweries and before being placed upon the market, be mixed with beer free of taxation.

The revenue officers must at all times have free access to the breweries, and the brewers must at all times keep an exact account of their stocks on hand and sales.

All matters of dispute are to be adjusted by the minister of finance.

The penalties for transgressing the law are from 50 to 10,000 kroners and imprisonment.

Taxable beer may be exported without paying the tax. A tariff of 15 öre per pound is placed upon all beer, mead, and extract of malt imported in demijohns, bottles, or jars, and 6 öre a pound on all imported in kegs, provided that from the 1st of April, 1891, to the 1st of April, 1895, the tariff duty is to be 10 and 4 öre per pound.

The discussion of the question of the manufacture of beer and its taxation was a matter of great interest. It was contended, on the one hand, that, as so great a quantity is consumed by the people at large, the burden would fall upon the poor to a great extent, while, on the other hand, it was contended that the tax would discourage its use and promote temperance. The discussion resulted in division in the ranks of the Left, the party opposed to the Government, to a greater extent than it has been divided for many years, and the Government party is hopeful that through this they may gain a majority in the Folksthing, but it affects, to some extent, both parties.

This tax on beer enables the Government to reduce the tariff on sugar, chocolate, petroleum, etc.

CLARK E. CARR,
Consul-General.

UNITED STATES CONSULATE-GENERAL,
Copenhagen, April 5, 1891.

GERMAN EXPORTS TO THE UNITED STATES.

REPORT BY CONSUL-GENERAL MASON, OF FRANKFORT.

For the more convenient reference of the Department, I have prepared and inclosed herewith a tabular exhibit showing the aggregate of declared exports to the United States from the consular district of Frankfort and each consulate under the supervision of this office during the first quarter of 1891, as compared with the exports from each consulate during the corresponding quarter of 1890 and the 3 preceding years. It will appear, from a study of these statistics, that the exports to the United States from southern and western Germany rose about $400,000 above the average during the March quarter of 1890 by reason of speculative operations in consequence of the pending tariff legislation. As a consequence, the exports of the March quarter of 1891 show a deficit of $350,000 below the average. In other words, the excess of 1890 and the deficit of 1891 so nearly balance each other as to assume the relation of cause and effect. Another reason for the decline in exports from this district during the past quarter will be found in the fact that the River Rhine was closed by ice during the greater part of the winter, so that the heavier kinds of merchandise, which are usually shipped from the interior by water, could not be moved.

Table showing the declared exports from the district of Frankfort during the first quarter of 1891, as compared with the corresponding quarter of the 4 preceding years.

Cities.	1887.	1888.	1889.	1890.	1891.
Frankfort	$748,850.34	$643,544.55	$762,736.96	$922,697.21	$853,722.76
Aix la Chapelle	653,572.57	494,767.75	420,370.79	360,665.35	413,741.45
Barmen	1,181,405.78	1,132,845.81	1,120,880.34	1,838,275.30	1,548,775.43
Elberfeld*	577,998.38	616,837.45	652,631.64	.....	.....
Crefeld	1,325,622.89	1,325,622.89	961,933.88	1,561,516.80	1,182,278.74
Cologne	793,184.03	549,282.46	597,362.33	664,266.20	450,723.56
Dusseldorf	1,163,820.98	844,166.60	471,711.19	315,610.93	346,007.12
Kehl	352,039.35	412,735.95	709,100.50	473,959.65	567,885.45
Mannheim	412,108.61	326,029.77	412,566.58	683,490.64	862,668.87
Mayence	357,300.51	390,107.93	360,249.50	429,239.24	412,768.27
Munich	147,690.16	193,557.83	225,900.11	263,276.49	180,207.20
Nuremberg	1,120,644.46	1,130,057.32	1,275,904.65	1,214,057.59	581,062.98
Fürth†	.....	.....	.....	.....	565,682.82
Sonneberg	375,558.00	418,591.92	368,573.04	500,936.59	648,798.07
Stuttgart	595,846.06	615,476.63	457,719.46	357,272.30	315,140.42
Total	9,804,672.12	8,729,935.85	8,994,997.02	9,585,264.29	8,929,463.14

*Consulate abolished in 1890. †Commercial agency established August 15, 1890.

The decrease during the first quarter of 1891, compared with corresponding quarter of 1890, was $655,801.15; average total exports during first quarter of 4 years 1887–'90, inclusive, $9,278,717.32; deficit of first quarter of 1891 from average of preceding 4 years, $349,254.26; excess of ex-

ports during first quarter of 1890 above average of 3 preceding years, $408,729.30; average total exports during first quarter of 10 years 1881–'90, inclusive, $7,347,777.72; excess of exports during first quarter of 1891 over average of preceding 10 years, $1,581,685.42.

FRANK H. MASON,
Consul-General.

UNITED STATES CONSULATE-GENERAL,
Frankfort, April 4, 1891.

Population of England and Wales.—On page 553 of CONSULAR REPORTS No. 127 the estimated population of the United Kingdom for 1889 is printed as follows:

England and Wales	39,015,613
Scotland	4,077,070
Ireland	4,730,566
Total	37,823,249

It is hardly necessary to say that the population of England and Wales should have been printed 29,015,613, instead of 39,015,613.

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REPORTS

FROM THE

CONSULS OF THE UNITED STATES.

No. 130.—JULY, 1891.

ISSUED FROM THE BUREAU OF STATISTICS, DEPARTMENT OF STATE.
ALL REQUESTS FOR THESE REPORTS SHOULD BE ADDRESSED TO THE SECRETARY OF STATE.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1891.

CONSULAR REPORTS

ON

COMMERCE, MANUFACTURES, ETC.

No. 130.—JULY, 1891.

FRUITS OF JAMAICA.

*REPORT BY CONSUL ESTES, OF KINGSTON.**

Naseberry sapodilla.—The naseberry sapodilla (*Achras sapota*) is a native of the West Indies. The tree has dark green, shining leaves. The fruit is about the size of an ordinary quince, having a rough, brittle, dull-brown rind, the flesh being of a dirty, yellowish white color, very soft and deliciously sweet. The exports were only 14,026, valued at $60, all to the United States.

Cashew.—The cashew (*Anacardium occidentale*) is a native of the West Indies. It is a tree 30 or 40 feet high, with simple leaves and small flowers. The fruit consists of a nut on the apex of a pear-shaped body formed of the enlarged top of the stalk. The nuts are commonly roasted, which improves their flavor. They yield by expression a light-yellow, bland, nutritious oil, superior to olive oil. The ripe, fleshy stalk is also used as a fruit, is about the size of an ordinary orange, and contains an acrid juice, from which a pleasant wine is made.

Pineapple.—The pineapple (*Ananassa sativa*) is a native of tropical America. It is an almost stemless plant with spiny leaves. The flowers are arranged many together in a dense head, the whole developing into a single fruit. It was so named from the resemblance of the fruit in shape and external appearance to the cone of the pine tree. The fruit is used fresh, stewed, or preserved. The juice is said to allay gastric irritability in fever. The export in 1889 was 8,292 dozens, valued at about $5,000, of which 7,671 dozens went to the United States.

Cherimoyer.—The cherimoyer (*Anona cherimolia*) is a native of Jamaica and Central and South America. It is a tree with inconspicuous flowers and a large, smooth, green fruit. The fruit, being somewhat acid, is very agreeable.

*Consul Estes acknowledges his indebtedness to Mr. William Faucett, esq., director of public gardens at Kingston, for valuable assistance in the preparation of this report.

Soursop.—The soursop (*Anona muricata*) is a native of the West Indies. It is a small tree, with large, green fruit covered with soft prickles, diuretic in its effects; closely allied to the custard-apple fruit of a large size.

Custard apple.—The custard apple (*Anona reticulata*) is a native of tropical America. It is a small tree; bark is an astringent and tonic; leaves and young twigs used for tanning. The fruit, unripe, yields a black dye; ripe, it is said to be antidysenteric and vermifugal. It is the size of a tennis ball, of a brownish color, containing a yellowish eatable pulp of the consistency of custard.

Sweet-sop.—The sweet-sop (*Anona squamosa*) is a native of tropical America. It is a small tree. The fruit, when unripe, dry, powdered, and mixed with flour, is used to destroy vermin. The ripe fruit is agreeable and good for digestion.

Peanut.—The peanut (*Arachis hypogæa*) is not cultivated in Jamaica to any great extent.

Breadfruit.—The breadfruit (*Artocarpus incisa*) is a native of the East Indies. It is a tree with milky sap and large fruit, 5 to 7 inches in diameter. The trees bear prolifically. The fruit, when baked, somewhat resembles bread and is eaten as food; hence the name.

Jack fruit.—The jack fruit (*Artocarpus integrifolia*) is a native of the East Indies. It is a tree with milky sap and large, oblong fruit. The seeds, when roasted, taste like nuts.

Bilimbi tree.—The bilimbi tree (*Averrhoa bilimbi*) is cultivated in the East Indies. It is a small tree with reddish-purple flowers and cylindrical fruit, with five rounded lobes. The flowers are made into preserves, the fruit is used in curry and preserved in sugar, and the juice is made into a sirup and is used as a cooling drink in fevers and externally in cutaneous diseases.

Carambola.—The carambola (*Averrhoa carambola*) is cultivated in the East Indies. It is a small tree with yellowish-purple flowers; fruit acutely five angled. Unripe, it is astringent, and is used as an acid in dyeing, probably acting as a mordant; fruit, ripe, is an antiscorbutic. It is made into curries, pickles, and preserves. The juice removes iron molds from linen.

Annotto.—The annotto (*Bixa orellana*) is a native of the West Indies. It is a low tree, 10 feet high, with large, rose-colored flowers. The seed vessels are spiny and seeds covered with a colored pulp. J. J. Bamery, island chemist, has invented a method of obtaining annotto in powder, which is said to be of a superior kind. The exports in 1889 were 455,874 pounds; value, about $19,000; to the United States, 410,585 pounds.

Lotus berry.—The lotus berry (*Byrsonima coriacea*) is native. It is a tree 20 to 30 feet high; leaves simple, flowers golden-yellow; fruit yellow, size of small cherry, and edible.

Divi-divi.—The divi-divi (*Cæsalpinia coriaria*) is native. It is a small, crooked tree; flowers white and fragrant; pod flat, incurved; grows in the hottest and driest places; pods rich in tannin. It is exported to a very

small extent to the United Kingdom. If the seeds are not removed, the acid they contain induces fermentation. The powder of the pods is astringent and is used for antiperiodic tonic.

Papaw.—The papaw (*Carica papaya*) is a native of the West Indies and Central America. It is a tree 18 to 20 feet high, with milky juice, generally branchless; leaves large, lobed; flower small; fruit yellow, size of a small melon. The juice of unripe fruit is useful in dyspepsia as a vegetable substitute for pepsin. The unripe fruit is cooked as a vegetable, and the ripe fruit as dessert has the same effect and acts as a mild purgative. The digestive property of the juice and the fresh leaves is made use of to render meat tender and facilitate the process of cooking.

Clove.—The clove (*Caryophyllus aromatica*) is cultivated in Jamaica. It is a small tree, of which the unopened flower buds form the cloves of commerce. The buds and stalks abound in an essential oil.

Star apple.—The star apple (*Chrysophyllum cainito*) is a native. It is a tree with leaves of a yellow hue beneath; flowers purplish inside; fruit size of an apple, green or purplish, and edible. It is so called because, when the fruit is cut across, the seeds present a starlike figure.

Cinnamon.—The cinnamon (*Cinnamomum zeylanicum*) is a native of the East Indies. It is a small tree. The cinnamon of commerce is obtained by stripping the bark from the shoots after they turn brown at the age of 18 months or 2 years. The leaves yield "clove oil."

Sweet orange.—The sweet orange (*Citrus aurantium*) is a native of northern India. It is a small tree. The orange is little cultivated in Jamaica. The Manchester orange used to have a distinct place in market quotations and be considered among the best, but, not having been cultivated for many years, it has deteriorated, and the Manchester orange of to-day offered in the markets of the United States does not come from Jamaica at all; yet, if properly cultivated, there is no doubt but the oranges of Jamaica would occupy a place near the top of the list. Quite a large trade is still done in shipping oranges to the United States from Jamaica. They are nearly all shipped in barrels and repacked in New York. The exports in 1889 were 35,394,271; value, about $25,500; to the United States, 34,354,621.

West India lime.—The West India lime (*Citrus aurantium*) is a smaller tree, with smaller leaves, flowers, and fruit than those of the orange. The fruit yields a juice which, like that from the lemon, is refrigerant and antiscorbutic, the latter property being due, according to Ganod, not to the citric acid, but to the potash salts contained in the juice. The export trade in limes and lemons is very limited, in 1889 being only 701 barrels, of which 690 went to the United States; total value, $1,000.

Bitter or Seville orange.—The bitter or Seville orange (*Citrus aurantium*) is a small tree, the wing of the leaf-stalk broader than that in the sweet orange; fruit with bitter rind and pulp. The rind is used for marmalade.

Shaddock.—The shaddock (*Citrus decumana*) is said to be so called from Captain Shaddock, who first brought this fruit from the East Indies. It is a large species of orange. The export in 1889 was 33 barrels; value, $80.

Citron.—The citron (*Citrus medica*) is a native of northern India. It is a small tree; leaves with short stalk and not winged; flowers pinkish, with purplish buds; fruit with transverse and longitudinal furrows; very thick, hard rind; pulp scanty, with acid juice. Like lemon rind, it yields an essential oil. The essence of cedrat is used for perfumery. The rind of the fruit is candied and used for dessert and confectionery.

Lemon.—The lemon (*Citrus medica*, var. *limonum*) is a native of northern India; fruit smooth and acid pulp. The outer rind is an aromatic stomachic. Oil or essence of lemon is obtained from the rind. The juice is used to prepare citric acid.

Seaside grape.—The seaside grape (*Coccolaba uvifera*) is a native of the West Indies and tropical America. It is a tree with roundish, cordate leaves; flowers without petals, and hanging bunches of dark-blue berries. In Jamaica this species remains small, whereas elsewhere it grows into a large tree, notably in Honduras. The fruit is so very astringent that caution has to be exercised in its use.

Cocoanut palm.—The cocoanut palm (*Cocos nucifera*) is a native of the tropics; a palm with pinnate leaves. "Toddy" is obtained from the flower spathe just before it opens by slicing off the top and collecting the sap in a vessel. It has a pleasant, sweetish taste, and in large doses is aperient; fermented it is intoxicating. It can also be boiled down into a coarse sugar called "jaggery," which is refined or fermented and distilled into spirits. The young cocoanut contains a sweet, refreshing water and jelly. The nut is generally harvested before it is perfectly mature. If the outer skin dries on the tree, the fiber of the husk becomes coarse and dark in color; if too young, it is weak. Cocoanut milk is made from gratings of the kernel. The shell is carved and used for many purposes. The dried kernel is known as "kopra," and is used for the preparation of oil by expression or boiling. The solid fat is employed in making candles and the oil for cooking, for lamps, as a substitute for codliver oil, etc. The cake which is left, or "poonac," is a good food for cattle, and is also used as a manure. The husk of the fruit yields coir fibre. Coir is remarkable for its durability, and is used for the manufacture of various textile fabrics, brushes, cordage for the rigging of ships, nets, matting, stuffing of cushions, pads, and mattresses, scrubbing brushes, fishing nets, etc. The tender leaves are used for plaiting mats, boxes, and other fancy articles. The mature leaves are plaited into matting, and also used as materials for fences, sails, buckets, books, fans, torches, and fuel. The ash yields an abundance of potash. The midribs of the leaflets are made use of as brooms, brushes, and skewers. The stalk of the spadic itself is in everyday use as a chunam brush to whitewash houses with. The reticulated web of the base of the leaf forms a coarse kind of cloth. The cottony hairs are used as a styptic. The soft parts within the stem of the cocoanut are cut out and pounded in a mortar; the resulting pulp is washed in water, and the farina is collected and used as a substitute for sago. Aged and unfruitful trees are cut down, and the wood is turned to a variety of useful purposes. It is hard,

handsome, and durable (known under the name of porcupine wood). It is used for veneering, and the hard stem is converted into drums, gutters, waste pipes, small boats, frames, furniture, rafters for houses, spear shafts, shingles, walking sticks, ladies' workboxes, etc. The root stem takes a high polish so as to resemble agate. A dye can be extracted from every part of the plant, producing a dirty brown color. They are grown and exported in large quantities. In 1889 4,831,615 were exported, the United States taking 4,088,375.

Bissy, kola, or cola.—The bissy, kola, or cola (*Cola acuminata*) is a native of tropical west Africa. It is a tree of moderate height; leaves simple, 6 or 8 inches long; flowers with a pale yellow calyx, but without petals; seeds large, and used like chocolate. They are said to be of great dietetic value, and also to be useful in dyspepsia and nervous diseases. It has been said that the beverage made with cola paste is ten times more nutritious than chocolate made with cacao. The reputation of this substance in sustaining the system against fatigue is such that it is meeting with consideration from the military authorities of the world as an article to be given to soldiers during active service. Seeds have been sold lately in London at 50 cents, and even 75 cents, per pound.

Taro.—The taro (*Colocasia antiquorum*) is a native of the East Indies. It is an arum-like plant, with large, heart-shaped leaves and tuberous root stocks. The tubers (eddoes) often weigh several pounds and form a nutritious food when well cooked. Young leaves may be eaten like spinach.

Calabash.—The calabash (*Crescentia cujete*) is a native of the West Indies. It is a tree with narrow leaves; flowers 2 to 3 inches long, variegated in color; fruit pulpy, with a hard shell. The expressed juice of the pulp is a purgative, also a demulcent and pectoral. The shell of the fruit makes good drinking cups, vessels for carrying water, etc.

Wild cucumber.—The wild cucumber (*Cucumis anguria*) is a native of the West Indies and tropical America. It is a climbing plant with tendrils; leaves five lobed; flowers yellow and small; fruit spiny. It is a wholesome vegetable; also used in pickles.

Akee.—The akee (*Cupania edulis*) is a native of tropical West Africa, naturalized in Jamaica. It is a tree with pinnate leaves; flowers white; fruit red, splitting on the tree, displaying the black seeds half inclosed with a white covering. The white covering of the seeds is a wholesome vegetable.

Yam.—The yam (*Dioscorea alata*) is a large, esculent tuber, or root, of various climbing plants, growing in all tropical climates, and forming, when roasted or boiled, a wholesome, palatable, and nutritious food. The yam forms an important item of food for the natives of Jamaica, and a small export trade is done in them.

Yam bean.—The yam bean (*Dolichos tuberosus*) is a native of tropical Asia. It is a twining plant; leaves compound; flowers white; pod straight and compressed, with reddish hairs; seeds red; root formed of a number of fibers several feet long bearing tubers. The roots afford a plentiful supply of wholesome food. The produce of three plants is usually a bushel. The

tubers may either be boiled plain, in which state they are a very good substitute for yams or other roots in common use, or they may be submitted to a process similar to arrowroot and a starch obtained. The starch is of a pure white, and is equal in every respect to arrowroot. To the taste it is very palatable, is easily digested, and is employed for custards and puddings. Even the trash left after obtaining the starch, which is lost in the preparation of arrowroot, may, when thoroughly dried, be formed into a palatable and wholesome flour. A very excellent flour may also be obtained by slicing the tubers, drying them in the sun, and then reducing to a powder. This plant is deserving of being more generally cultivated than it has been. It can be planted at any season of the year, and the roots are fit for digging in the course of 4 or 5 months. The return is infinitely greater than that from arrowroot, and the proportion of starch also is more abundant. The young pods may be used like French beans, but the ripe beans are poisonous.

Coca shrub.—The coca shrub (*Erythroxylon coca*) is a native of the Andes cultivated in Jamaica. It is a shrub with pale yellow flowers and red berries. The leaves dried form the coca of commerce. The chief constituents of coca are cocaine and hygrine.

Antidote cacoon.—The antidote cacoon (*Feuillea cordifolia*) is a climbing plant with tendrils; leaves roundish, three-fourths of an inch; flowers small, orange colored; fruit size of an apple, of a russet color, hard, full of large, flat, round seeds.. The seeds abound in oil and are said to possess medicinal qualities.

Okra.—The okra (*Hibiscus esculentus*) is a large annual herb; flowers pale yellow, with a red base; fruit cylindrical, 3 to 6 inches long. The principal use of okra fruit is as a vegetable and to thicken soups, etc. The whole plant abounds in a viscid mucilage, and the seeds yield an oil similar to olive oil.

Indigo.—The indigo (*Indigofera tinctoria*) is raised but little in Jamaica. This is the indigo of commerce.

Mammee.—Mammee (*Mammea americana*) is a native. It is a spreading tree 40 to 60 feet high; fruit larger than an orange, russet brown, of a sweetish, somewhat aromatic, taste, and of a peculiar odor.

Mango.—The mango (*Mangifera indica*) is a native of the East Indies. It was naturalized in tropical America and introduced into Jamaica about 100 years ago. It now grows spontaneously in the interior of the island up to 4,000 feet. The diameter is up to 4 feet; height, 30 feet; fruit of an oval, oblong shape, size of medium apple. There are many varieties of mangoes in Jamaica, the famous "No. 11" being far superior to all others; but so little attention is paid to their care or cultivation that it is getting very hard to get the No. 11 unmixed with other varieties. Few people like mangoes at first, but soon acquire a taste for them. They are to be had almost the year round, but the months of May, June, July, and August are their season. During this time the natives very nearly live on them, and it is harder to employ a native during this season of the year than any other, as the mango supplies

nearly all his wants during the season. Thousands of bushels rot on the ground for want of a market; few are exported. In 1889 170,980 mangoes were exported, 70,530 to the British West Indies and 95,250 to the United States. They are very perishable, but with fast steamers that could make the trip from north side ports to New York in 4 or 4½ days a profitable trade might be built up. The mangoes can be had almost for the gathering.

Cassava.—The cassava (*Manihot utilissima*) is a native, probably, of Brazil. It is a half-shrubby perennial, with very large yellowish roots filled with a milky juice, which is poisonous; but by treatment with water, heat, and pressure the poisonous qualities are removed, and the root yields a starchy substance called cassava or cassava meal, much employed for food. Tapioca is purified cassava.

Genip.—The genip (*Melicocca bijuga*) is a native of Trinidad. It is a large tree, 40 to 50 feet high; leaves pinnate; flowers very numerous, small, and fragrant; fruit green, size of a pigeon's egg. The pulp is edible and of a sweet, subacid, slightly astringent taste.

Arrowroot.—The arrowroot (*Maranta arundinacea*) is an herbaceous perennial. The root is used as a medicinal food.

Plantain.—The plaintain (*Musa paradisiaca*) has a growth much like the banana fruit. It requires cooking. Fried or boiled when ripe and roasted when green, it is an excellent vegetable of great value to the natives.

Banana.—The banana (*Musa sapientum*) has a soft, herbaceous stalk, with leaves of greath length and breadth. The flowers grow in bunches covered with sheaths of purple color. The fruit is 5 or 6 inches long and over 1 inch in diameter. It is eaten either raw when ripe or fried in slices. Bananas are third in rank in the list of Jamaican exports. In 1889 2,881,313 bunches were exported, valued at $1,226,917, of which the United States took 2,879,560 bunches. By cultivation the production could be greatly increased.

Nutmeg.—The nutmeg (*Myristica fragrans*) is nearly spherical, of the size of a medium-sized pear, of a yellowish color without and almost white within. It opens into two nearly equal longitudinal valves, inclosing the nut surrounded by the exterior covering, which is mace. The nut is oval and the shell dark brown. This immediately envelops the kernel, which is the nutmeg of commerce.

Rice.—The cultivation of rice (*Oryza sativa*) is just beginning to receive attention in Jamaica.

Mountain sweet cup.—The mountain sweet cup (*Passiflora edulis*) is a native of the Andes naturalized in the Blue Mountains. It is a passion flower with lobed leaves and whitish flowers; fruit egg shaped, purplish, with hard shell and edible pulp.

Water lemon.—The water lemon (*Passiflora laurifolia*) is a native of the West Indies and tropical America. It is a passion flower; leaves oval, entire; flowers white with red blotches; crown violet with white streaks; fruit egg shaped, of an orange-yellow color, and soft rind; edible pulp.

Sweet cup.—The sweet cup (*Passiflora maliformis*) is a native of the West Indies and tropical America. It is a passion flower; leaves ovate, entire; flowers variegated; fruit globular, green with yellow tint; very hard shell, and edible pulp.

Granadilla.—The granadilla (*Passiflora quadrangularis*) is a native of the West Indies and tropical America. It is a passion flower with four-winged stem; leaves ovate, roundish; flowers large; petals rosy; crown violet; fruit 5 inches long, greenish yellow, with soft, thick rind; root large and fleshy. It is edible, like yam. The pulp is edible, and the rind is edible when cooked.

Wild clove.—The leaves of wild clove (*Pimenta acris*) yield oil of bay, one of the ingredients of bay rum.

Pimento or allspice.—The pimento or allspice (*Pimenta officinalis*) is a native. It is a tree 30 feet high, with very smooth, light gray bark. The wood is very hard. The young trees are used for walking sticks, in which a considerable export trade is done. The berries are collected of full size, though unripe, and dried in the sun for export. There was $232,825 worth of pimento exported, of which $107,220 went to the United Kingdom and $123,558 to the United States.

Guava.—The guava (*Psidium guavy*) is a native. It is a low tree or bush. The fruit, stewed or made into jelly, is delicious.

Pomegranate.—The pomegranate (*Punica granatum*) is naturalized. It is a bush or small tree. The fruit is the size of a large orange, having hard rind, soft pulp, and numerous seeds. It is used as a dessert and may be eaten as a slightly astringent and refreshing refrigerant in some febrile affections, especially those of the bilious type.

Jamaica blackberry.—The Jamaica blackberry (*Rubus jamaicensis*) is a native of Jamaica. It is a bramble; fruit palatable. If infused in spirits with the bruised kernels of the prune tree and sweetened with sugar, a liqueur is obtained not inferior to, and not to be distinguished from, the Copenhagen cherry brandy.

Sugar cane.—The sugar cane (*Saccharum officinarum*) is a native of India and China. It is a large perennial grass, with thick rootstock and numerous stems. The ripe canes are cut down to the ground, stripped of their leaves, and subjected to pressure between two rollers, or in some other suitable way. The cane juice thus obtained is clarified by the combined use of lime and heat. The heat coagulates any albumen which may be present, and the lime neutralizes the free acid and combines with a peculiar albuminous body not coagulable by heat or acids and forms with it a coagulum, the separation of which is promoted by the heat. Part of it rises to the top as a scum, and the remainder subsides. The clarified juice is then drawn off into the boiler, evaporated, and skimmed. When it has acquired a proper tenacity and granular aspect, it is emptied into a cooler and allowed to crystallize or grain. The concrete sugar is then placed in casks perforated with holes in the bottom, and the sugar is left to drain for 3 or 4 weeks. It is then packed

in hogsheads, forming raw or muscovado sugar. The drainings or uncrystallized portion of sugar constitutes molasses. Molasses is capable of fermentation, and then by distillation yields rum. The sugar and rum production has greatly fallen off in Jamaica since slavery was abolished, and more rapidly within a few years, consequent upon the development of the fruit trade. The sugar exports in 1889 were 32,323,826 pounds; value, $1,189,217.45; of which the United States took 23,327,250 pounds, valued at $858,226.66. The rum exports for same year were 1,374,931 gallons, valued at $669,-110.15; of this the United Kingdom took 1,216,012 gallons and the United States 37,442 gallons. Thus the United States is Jamaica's best sugar market and the United Kingdom the best market for her rum.

Chocho.—The chocho (*Sechium edule*) is cultivated in the West Indies. It is a climbing plant, with tendrils; roots large and fleshy; leaves large, simple; flowers yellow; fruit 4 or 5 inches long. The root can be used like the yam. The fruit is a most wholesome vegetable. It is also made into tarts with the addition of limes.

Tamarind.—The tamarind (*Tamarindus indica*) is cosmopolitan in the tropics. The trunk of the tree is lofty, large, and crowned with spreading branches; it is much valued as a shade tree. The flowers are in simple clusters, terminating the short lateral branches. The fruit is prepared in the West Indies by removing the shell, placing alternate layers of fruit and sugar in a jar, and then pouring boiling sirup over them. In the East Indies the shell is removed and the fruit simply pressed together in a mass. Tamarind pulp is laxative and refrigerant, and is also used to prepare a gargle for sore throat.

Cacao or chocolate tree.—The cacao or chocolate tree (*Theobroma cacao*) is a native of tropical America. It grows to the height of 20 or 30 feet, with a brownish bark, and bears a pulpy fruit containing seeds of a flat, oblong shape, from which chocolate is made. The exports in 1889 were 524,896 pounds; value, $51,496.42; of which 367,705 pounds went to the United Kingdom and 63,380 pounds to the United States.

Vanilla.—The vanilla (*Vanilla planifolia*) is a climbing orchid with pale yellowish-green flowers and a long two-valved pod. The pods forming vanilla are gathered before they are quite ripe and dried. Vanilla is used in perfumery and for flavoring chocolate, liqueurs, etc.

Wild grape or water-withe.—The wild grape or water-withe (*Vitis caribæa*) is a small fruit of the size of a current, and has a rough acid taste, recommending it for tarts.

Grape vine.—The grape vine (*Vitis vinifera*) is a native of south Europe, scarcely cultivated in Jamaica. It could be profitably raised in some parts of the island.

Mountain plum.—The mountain plum (*Ximenia americana*) is a native of the tropics. It is a tree with simple leaves; flowers white, in clusters; fruit yellow, size of a plum; pulp of a pleasant subacid taste with a slight astringency.

Ginger.—The ginger (*Zingiber officinale*) is a native of tropical Asia. It is a perennial herb, with a rootstock consisting of many roundish joints. The rootstock dried forms the ginger of commerce. The exports for 1889 were 895,227 pounds; value, $90,592.01; of which the United Kingdom took 564,069 pounds and the United States 299,630 pounds.

W. R. ESTES,
Consul.

UNITED STATES CONSULATE,
Kingston, Jamaica, March 25, 1891.

INDUSTRIAL POSSIBILITIES OF COLOMBIA.

REPORT BY MINISTER ABBOTT, OF BOGOTA.

PHYSICAL FEATURES.

The territory of the Republic comprises the northwest corner of South America. It is bounded upon the north by the Caribbean Sea, on the east by Venezuela and Brazil, on the south by Ecuador, and on the west by the Pacific Ocean and Costa Rica. Its shape is irregular, the northern peninsula reaching 12° 25′ north latitude, its east and west extension being between 70° 40′ and 82° 40′ west longitude, while its southern limit is nearly coincident with the equator.

It is said to contain about 500,000 square miles, an area equal to that of New England, New York, New Jersey, Pennsylvania, Delaware, Maryland, Ohio, Indiana, West Virginia, Virginia, Kentucky, Tennessee, North Carolina, and Georgia. The extreme length from north to south is about 900 miles, and its extreme breadth from northwest to southeast approaches 1,200 miles. Its average length is, more or less, 700 miles and breadth 500 miles. Its southeastern half consists of vast plains, whose numerous rivers, rising in the cordilleras at the west, discharge their waters into the Atlantic through the mouths of the Amazon and Orinoco. These plains, hot and insalubrious, are sparsely peopled by the aborigines of the Republic, who there, as well as in certain other portions of the country, exist as untutored as their ancestors, unrestrained by law, untouched by the hand of civilization, a standing menace to the curious traveler or the adventurous hunter; still, these plains are among the richest and most valuable possessions of Colombia. Their fertile lands are susceptible of cultivation, and their products could find an easy market by a narrow-gauge railroad to the Magdalena River, the construction of which is not an impossible or an improbable thing. On these now useless plains vast herds of cattle would thrive. From the forests, which exist here and there, might be extracted large quantities of gums, fibers, and precious woods. Coffee and cacao might be made to yield rich harvests. The difficulties of transportation have always prevented any material advancement upon these plains. If Colombia extended to the Atlantic coast, steam navigation to these regions might prove,

on examination, to be the better; but it is more probable that a railroad to the Magdalena would prove more feasible.

The northern and western parts of the country constitute one of the most mountainous regions of the globe. The great chain of the Andes, arriving at Colombian territory, separates itself into three divisions, known, respectively, as the Eastern, Central, and Western cordilleras, which, with numerous ramifications, cross the Republic in a northerly direction.

These topographical peculiarities give to the country every variety of climate, soil, and vegetation. In the high peaks or ranges agriculture is nearly impossible, while in the rich river valleys the laborer is oppressed with the heat of the tropical sun, which the Caucasian almost instinctively avoids.

The wealth of these lands is unquestionable, and the time of their development is approaching.

The constitution and governmental system of the Republic are well known to the Department and need no further description, and the same may be said of its railroads.

TELEGRAPHS.

The first telegraph was constructed in 1866 by Mr. Stiles, a citizen of the United States. There are now 8,400 kilometres in operation and two hundred and forty-five offices. In the more populous regions the service is excellent, but in other sections it is slow and liable to frequent interruptions. The foreign cable service is most satisfactory.

MERCHANT MARINE.

The country possesses no merchant marine, unless the small schooners engaged in the coasting trade may be so designated. It has two small men-of-war for enforcing compliance with its customs laws.

DEPARTMENTS.

The country is divided into nine departments, viz, Antioquia, Bolivar, Boyacá, Cauca, Cundinamarca, Magdalena, Panama, Santander, and Tolima. Of these departments Cauca is the most extensive, comprising nearly one-half of the Republic and being the only one, except Panama, bordering on the Pacific Ocean.

I venture to say a few words upon each department.

Antioquia.—The department of Antioquia is very mountainous and quite sterile. Its capital is Medellin, a city of 30,000 inhabitants, a great commercial and intellectual center. It is noted in the foreign trade for the sterling integrity of its merchants. It is a distributing point for Antioquia and a large section of Cauca. It is famous for the peaceable and laborious character of its people. Its soil is rich in mines of gold, its mountains are crossed by numberless veins, and its river beds form an uninterrupted series of gold-bearing sands. The richest sections are said to be in the lands watered by the Porce and Nechi rivers. It would be difficult, even impossi-

ble, to estimate the value of the precious metals taken from Antioquian soil since the conquest, but even more difficult to form an idea of what still remains.

The department contains seventy-six cities and towns, has a population of 370,000 souls, and is reached by the Magdalena River port of Puerto Berrio, 6 days' journey by river steamer from the Caribbean coast.

Bolivar.—The department of Bolivar derives its name from the great liberator Simon Bolivar. Its capital is Cartagena, whose name is celebrated in American annals. It is a walled city whose fortifications are said to have cost the Spaniards $59,000,000. It has a large and perfectly sheltered harbor. It has a population of 19,000.

This department is well watered by the Magdalena, San Jorge, Cauca, and Sinu rivers, and, as a consequence, its plains, and even its mountains, are fertile and productive. Its agriculture is not, however, well developed, but its cattle industry is of considerable importance. From its forests, as from all those bordering upon the great rivers, are extracted resins, balsams, and the most beautiful precious woods. In this department is also situated the important port of Barranquilla. The population is 300,000, and the cities and towns number 123.

Boyacá.—The department of Boyacá has for its capital the city of Tunja, one of the most ancient in the country, and whose population is 6,000. Relatively speaking, agriculture and manufacturing are in a forward state in Boyacá. In the city of Muso there exists the largest emerald mine of the world. Cattle cover the vast plains of the east. The cities and towns number 127, and the population is 484,000.

Cauca.—The department of Cauca has for its capital Popayan, a city of 8,000 people. The soil is very fertile and capable of the most advantageous cultivation. Its climate is somewhat unwholesome in certain sections. Gold abounds in the Choco region, where may also be found the best platinum mines in America. The cities and towns number 128. Among them Cali deserves special mention. It contains 13,000 inhabitants and seems destined to enjoy a large increase of business and population upon the completion of the railroad to Buenaventura, now being constructed under the auspices of an American syndicate. The population of Cauca is 436,000.

Cundinamarca.—The department of Cundinamarca may be said to be the most important of the Republic, since it is the seat of the capital Bogota. This beautiful and cultivated city is situated upon a vast plain, 8,500 feet above the sea level. Its temperature is about 60° F., and its population may be estimated at 100,000. Bogota is the principal commercial and intellectual center of the country, and is adorned by numerous beautiful edifices and public parks.

In Cundinamarca are found the great salt mines of Zipaquira. The monopoly of their products constitutes a large source of revenue to the nation. The principal industries are agriculture and cattle-raising. It has 108 cities and towns and 410,000 inhabitants.

Magdalena.—The department of Magdalena has for its capital the seaport city of Santa Martha, whose inhabitants number 6,000. Although this section is poor in metals, it contains most valuable coal mines. Cattle-raising is also a large industry. Its forests abound in resins and precious woods. It has 68 cities and towns and 85,000 inhabitants.

Panama.—The department of Panama is named from the celebrated isthmus. Its commercial importance is derived from the fact that it is the world's highway between the Atlantic and Pacific. Its capital is the city of Panama, whose inhabitants number 25,000. The Panama Railroad, owned by a North American corporation, crosses the isthmus from Colon to the capital. The industries, other than mercantile, are not great. Pearls are found upon its coasts. The cities and towns number 60, and the population is 221,000.

Santander.—The capital of the department of Santander is Socorro, a city of 16,000 inhabitants. This section is distinguished by the vigor and energy of its people. Agriculture flourishes to such an extent that more coffee is raised here than in any other equal area of the country. Hats and ordinary cloths are manufactured. Its mining interests are also important. Its principal river port is Puerto Nacional. It has 120 cities and towns. The most important is Cucuta, a commercial center and the end of the Cucuta Railroad. It has 424,000 inhabitants.

Tolima.—The department of Tolima is an agricultural and mining section. Its capital is Ibague, a city of delightful climate, with a population of 10,000. Its mines are rich and valuable and have been worked ever since the Spanish conquest. Its cities and towns number forty-nine, the principal of which is Honda, the head of navigation on the lower Magdalena River. Its population is 230,000.

MANUFACTURES.

If we except the few cloths which are made in the departments of Boyacá and Santander and the very few woven by the Indians of Pasto, upon the boundaries of Ecuador, the straw mats fabricated in Magdalena and Bolivar, and the hats made in certain sections of Tolima, Antioquia, and Santander, we may affirm in a general way that there are no manufacturing industries in Colombia. Such cloths as are woven are the result of the same methods as were employed a century ago. So small is this industry that even the inhabitants of the remotest villages are ordinarily compelled to wear cloths of foreign manufacture, only 1½ per cent. of which come from our own country.

Climatic conditions have much to do with this lamentable situation. In many sections of the Republic these conditions are such as to prevent the descendants of the Spaniards from occupying the land, thereby leaving everything to the progeny of the former African slaves, who, by reason of the same conditions, never advance much beyond such labor as will enable them to gain a bare subsistence. To such sections the Caucasian has rarely immigrated. But in these extensive regions exists a possible source of great wealth, and there is no doubt whatever that temperate and sensible men,

possessed of some capital, could not only live in excellent health, but could also obtain a most satisfactory return from the cultivation of the soil. In addition to this, the larger portion of the cultivated population lives high in the mountains, and therefore distant from the seacoast. This distance inevitably develops a certain provincialism and lack of interest in the outside world and in internal progress. The result is that manufactures do not, and can not, flourish until Colombia has such improved methods of communication with other nations as will bring her people in free and frequent intercourse with the general progressive instincts and endeavors of the times.

INTERCONTINENTAL RAILROAD.

The solution of this and other difficulties with which the Colombian people have to contend in their struggle for improvement and progress lies largely in the success of the intercontinental railroad scheme. While it is not generally held that such a railroad should not traverse the Central American republics and the Isthmus of Panama, there are those who think it would be far better to begin the road at some Colombian port—Cartagena, Barranquilla, or Santa Martha—and to operate the same in connection with lines of steamers to New York and New Orleans.

In addition to this, the railroad communication from Mexico might well be extended south across the Central American republics to the Isthmus of Panama, and thence by the Pacific coast to connect with the main line from the Caribbean Sea.

Beginning at either one of the Colombian ports above referred to the intercontinental line would probably follow, more or less, the Magdalena River and cross the chain of the Andes by the pass which is said to exist near its head waters.

Among the many results beneficial to Colombia which would follow the construction and operation of this line would undoubtedly be included the establishment of numerous manufactories, the machinery for which could hardly be transported here with profit under existing conditions.

MULE TRAINS.

The only present method of carrying merchandise to and from the coast is by means of the great rivers. Of these, the Magdalena is the most important and has the best service. Others are navigable for certain distances by boats of light draft, but from the lands and forests of all might easily be obtained an abundance of many articles of market value, as, for instance, vegetable ivory, the vanilla bean, rubber, tolu balsam, gums, and a great variety of precious woods. Upon the banks of the Atrato and Sinu rivers is found a most fertile and productive soil. An abundant rainfall insures satisfactory harvests of corn, sugar cane, pineapples, bananas, oranges, cacao, vanilla beans, rubber, and numerous other products, the proper cultivation of which would yield a most handsome revenue to the people. To these two rivers and the lands adjoining I invite the attention of our capitalists.

With the exception of river traffic and nine short lines of railroads, the whole commerce of the country is carried on by means of mules.

AGRICULTURE.

Coffee and quinine.—Passing to the agricultural industry, it may be said that coffee forms the chief article of export and has served to counterbalance in a great degree the serious loss occasioned during the last 12 years by the decrease in the exportation of quinine bark. The latter exists in vast quantities and of the best quality, but its recent cultivation in India has rendered it impossible for the Colombian article to compete with the Indian, because of the vast relative expense of transportation to the coast. The principal coffee centers are Cundinamarca, Santander, and Tolima.

Cacao.—Cacao is also raised and exported in large quantities from Tolima, Santander, and Cauca, but the quantity ought to be increased tenfold. There is an abundance of waste lands especially adapted to its cultivation. Possibly the most favorable region is in the magnificent and fertile section of the department of Cauca. But the increase of production will undoubtedly await the construction of railroads.

Bananas.—Bananas ought to form an important article of export. Even at the prospect of the speedy construction of the Santa Martha Railroad large plantations have been established on its proposed line. No better lands can be found in the world for the cultivation of the banana than in Colombia. At present few or none are exported, except from the Isthmus of Panama.

Cotton.—The country is adapted to the cultivation of cotton, and, to a certain extent, it is even now grown; but the native fiber is short and unsatisfactory and the exportation inconsiderable. However, it can not be doubted that long-fiber cotton would flourish in numerous sections and might easily be made a great source of revenue.

Tobacco—The tobacco of the country is magnificent. The most satisfactory is said to be that of Ambalema; but it can hardly be questioned that most satisfactory crops could be raised in numerous sections of the Republic. Large quantities are now exported to Germany, and a little care, combined with means of transportation, ought to triple the harvest.

Cereals.—Wheat, barley, and potatoes are cultivated, but not in sufficient quantities for home consumption. It is difficult to understand why they are not articles of export, instead of articles of import, since the soil is admirably adapted to their demands.

Vegetables.—All kinds of vegetables flourish and only need cultivation to render them equal to those of other nations. This lack induces their importation in cans from foreign countries.

Cattle.—Cattle-raising is an almost universal industry, but is most extensive in Bolivar and Magdalena. The hides and horns go mostly to the United States.

Hogs.—Hog-raising is so small an industry that American lard competes with the native article even in Bogota, 700 miles from the coast.

Sheep.—Sheep-raising flourishes to a limited extent in the heights of Cundinamarca and Boyacá, but is only sufficient for the necessities of their people. In other sections the sheep is rarely seen, and in the hot regions never.

Horses and mules.—Horse and mule raising is, of course, somewhat extensive, but is conducted on a very small scale, so far as individuals are concerned. The latter animal, so useful and necessary, always commands a high, and sometimes a seemingly unreasonable, price.

Foreign stock.—Foreign stock has been introduced to a limited extent, especially in Cundinamarca and Antioquia; but the far greater part of the cattle and horses are of native stock, many of which compete most favorably with the imported.

Fisheries.—The fishing industry is of small importance and only exists at the coast and on the great rivers. There are no fish, properly speaking, in the rivers and lakes of the plains of Bogota, and its lack constitutes one of the most serious inconveniences for the foreigner. My predecessor extended to this Government the good offices of the Department for stocking the lakes and streams of this section, but, for some reason, no practical arrangement was ever effected.

Wild animals.—The intertropical regions abound in wild animals, but the tropical forests, with their undesirable climates and almost impassable vegetation, have conspired to render the chase an unprofitable industry. But in higher and more benignant regions the chase constitutes a profitable employment for many people.

In a word, it may be said that, as manufacturing industries do not exist to any great extent, so agricultural industries are in a very backward and unsatisfactory condition; but, as these ought to constitute the life and the progress of the country, so I believe they will come to do so when ways of communication have been established. From such ways will come not only cheap freights, but an influx of a most desirable foreign element, which will tend to produce a scientific cultivation of the soil now tilled by the most primitive and unproductive methods.

COLOMBIA AT THE CHICAGO EXPOSITION.

Perhaps no immediate act would be of more benefit to Colombia than a full and varied exhibit of her vast forest and other resources at the Chicago exposition, and it is a great satisfaction to believe that this progressive and patriotic people fully realize the importance of the opportunity now presented.

IMPORTS FROM THE UNITED STATES.

The articles which we ought to import to this country under present conditions are iron and steel and their manufactures, especially machinery and tools; breadstuffs, oils, drugs and medicines, California wines, beer, matches, lard, butter, sugar, paints, tar and pitch, paper, etc.

My former reports will show our percentages in all these articles, which should be largely increased. Even with the Colombian tariff rates, American

flour, lard, butter, sugar, and beer are found in large quantities upon the *sabana* of Bogota, and with some concessions in such rates these and all the above-named articles ought to compete on most satisfactory terms with those of other nations.

Of textile fabrics we import here but few—not 2 per cent. It is not impossible that we might, by the manufacture of an inferior quality of goods, compete with England, notwithstanding the present Colombian tariff rates. But if we could secure a reasonable concession as to these dues, it can be hardly doubted that we could give the Colombians better articles than they now buy for the same or less prices. Of course, much will depend upon the compliance by our manufacturers and sellers with the trade conditions existing here, which have been explained in former dispatches.

TEA CULTURE.

Among articles not now cultivated in Colombia may be mentioned tea. Competent authorities declare certain sections of the Republic to be peculiarly well adapted for the development of this plant. If this should prove, on experiment, to be the case, an important industry might be developed, and the United States could obtain a tea whose aroma would not be subject to deterioration from long sea voyages. I believe that this question should be seriously investigated, and the result might be the establishment of an industry which would compete with that of India and China and cause a most desirable reduction in the price of this now prime necessity.

Numerous other articles might be most advantageously produced here if once modern methods of cultivation were introduced and understood.

MINES OF COLOMBIA.

It is hardly necessary to speak of the mining interests and possibilities of a country which is universally acknowledged to be one of the richest on the globe. Colombian soil shelters unknown quantities of gold, silver, iron, copper, and lead. Emeralds, amethysts, rubies, jasper, and jet are also found. The salt mines are wonderful. Coal is found in extensive deposits, while sulphur, lime, and many other useful articles of commerce abound.

The working of these mines of wealth is retarded, and often made impossible, by their distance from the sea. From lack of roads and railroads the transportation of the proper machinery is always difficult, expensive, and often impossible.

It has been said that the best evidence of a nation's progress consists in the quantity of iron, coal, and sulphuric acid it consumes. This can hardly be true of Colombia. It consumes but little of these articles, relatively speaking; but the reason lies, not in its lack of progressive spirit, but rather in the impossibility of paying the enormous freights for importation of the articles mentioned and of the machinery for their production. Properly speaking, there is only one foundry in Colombia, and that is situated upon the *sabana* of Bogota, more than 600 miles from the sea, and, by

reason of lack of roads, can only supply a limited area. In the rest of the country all iron must be imported.

Coal is found in all parts of Colombia and is easily extracted, but at present only in sufficient quantities for forges. There are magnificent coal mines in Magdalena, near the Caribbean coast. By a reasonable outlay these mines ought to produce an abundant supply of coal for ocean steamers, which now often depend for their fuel upon deposits in the Antilles brought across the sea for that purpose.

Sulphuric acid is imported and sold at fabulous prices for medicinal and industrial purposes.

The best and most thoroughly equipped gold and silver mining establishments are in Antioquia and Tolima. The largest part belong to the English. The greatest difficulty encountered by the mining interests is the lack of roads. An idea of the obstacles found may be obtained from the fact that only a year ago there were delayed in Honda, not over 60 miles from their destination, 28,000 bales of foreign merchandise which could not be moved for lack of means of transportation. At that time the freight for 250 pounds of cargo reached the astonishing sum of $15 in gold, or $30 in the money of the country.

SUGAR PRODUCTION.

Upon regarding the foregoing, I find that no mention has been made of the production of sugar, for which vast regions of the country are admirably adapted. There are no statistics to show the amount now raised; but it is not sufficient to supply the necessities of the people, since sugar is not exported, but, on the contrary, forms a considerable article of import from the United States.

JOHN T. ABBOTT,
Minister.

UNITED STATES LEGATION,
Bogota, April 3, 1891.

FRENCH WINE PRODUCT OF 1890.

REPORT BY CONSUL KNOWLES, OF BORDEAUX.

The annual report of the wine crop in France for the year 1890 has recently been issued by the minister of finance, whose résumé, as usual, is framed from the statistics furnished by the general director of taxation.

The returns gathered and published by this executive comprise the total production of wine in France and its colonies, together with the number of acres planted with vines and the intrinsic value of the wine in its natural state.

From this official estimate it is apparent that the product, in point of quantity, is greater than for several years past (the year 1888 excepted), being, in fact, as much as one-seventh part in excess of the crop of 1889.

In quality it is presumed to be of ordinary excellence, though the quality of red wine is, as a rule, determined only after it has been 2 years within the cask. As near as can be approximately ascertained, however, the value of the crop of 1890 amounts to fully $89,764,000, an increase of $20,000,000 over 1889.

The land covered by vineyards is estimated at 4,541,360 acres. In 1889 4,544,467 acres of land were given over to the culture of the grape; hence we find a decrease of 1,107 acres. Journals devoted to the interest of the wine and spirit trade attribute this not altogether insignificant decrease to errors contained in the returns presented to the minister; but more careful investigations indicate that mildew has destroyed large tracts of vineyard, aided and abetted in its ravages by the phylloxera, a little insect to which German bacteriologists may eventually direct their attention to the end of finding some chemical injunction wherewith to stop him in his devastating work.

The quantity of wine made during the vintage of 1890 was 603,426,160 gallons, the product being equal to about 133 gallons per acre or a fraction less. Precisely how the product of last year compares with that of previous ones can be judged from the accompanying table:

Year.	Quantity.	Year.	Quantity.
	Gallons.		*Gallons.*
1880	652,970,670	1885	628,080,683
1881	732,587,930	1886	551,644,223
1882	679,800,860	1887	535,575,581
1883	792,998,290	1888	662,548,344
1884	735,529,810	1889	511,150,819

The increase in the crop of 1890, according to the statements of the official summary, has shown itself in forty-five districts, though principally in the lower Alpes-Maritimes Aveyron, Savoy, Var, Rhône, Drôme, Vienne, Allier, Loire-Inférieure, Isère, Puy-de-Dôme, Pyrénées-Orientales, Loire, Haute-Savoie, Bouches-du-Rhône, Gard, Vendée, Ain, Hérault, Aude, and Saône-et-Loire. On the other hand, there was a decrease in thirty-one districts, more apparent in Morbihan, Vosges, Haute-Marne, Corèze, Meurthe-et-Moselle, Eure-et-Loir, Aube, Sarthe, Gironde, and Haute-Saône.

In far greater quantity than heretofore have growers employed low-tariff sugar in the manufacture of the lower-class wines. The quantity of sugar declared for this purpose, which, during the first 10 months of 1889, amounted to 42,900,000 pounds, was, during the same period in 1890, 72,380,000 pounds, an increase of 29,480,000 pounds.

Of wine made from dry grapes, or the residuum of the press, to which I called attention in my report of the vintage a year ago, great quantities have been manufactured. The figures show, for wine made from skins and

pulp after pressing, 42,847,505 gallons; wine made from dried grapes, 94,485,628 gallons.

Importations of wine into France during 1890 for blending and other purposes show a slight increase over the preceding year. The comparison, quantities, and value are shown in the following table:

Table showing the importation of wines into France.

Whence imported.	1888.	1889.	1890.
	Gallons.	*Gallons.*	*Gallons.*
Spain	170,709,912	151,525,974	168,515,140
Algeria	26,910,857	34,792,782	43,118,272
Italy	24,990,837	2,233,533	436,040
Portugal	24,459,009	18,757,054	4,302,800
Other countries	17,317,424	17,191,725	15,156,636
Total	264,388,039	224,511,068	231,528,888
Estimated value	$81,142,252	$69,107,921	$71,057,594

From Spain, it will be observed, is imported the usual quantity. Italy, on account of the expiration of a commercial treaty for a long time existing between France and herself, now sends very little wine, or, in fact, merchandise of any description, to the last-named country. In the importations from Portugal there is a decided falling off, while the product in France's most important wine-growing colony shows a steady upward tendency.

Viticulture in Algeria is decidedly on the increase, though the quality of its wines is inferior. They are earthy, heavy, and alcoholic. Time alone can remedy these defects. There are at the present moment 253,394 acres of vineyards under cultivation in Algeria, the same having produced in 1890 61,939,000 gallons of wine, an average of 244.43 gallons per acre.

Returning to France, we find that in the department of the Gironde, in which district are produced all the clarets and white wines known to, or drank in, America, the crop of 1890 falls far below that of 1888 and 1889, though it compares favorably with the average vintages of past years. The following summary is sufficient to demonstrate this fact:

Year.	Quantity.	Year.	Quantity.
	Gallons.		*Gallons.*
1880	36,541,772	1887	25,077,467
1881	28,084,760	1888	58,690,435
1882	24,519,140	1889	47,288,837
1883	41,104,973	1890	35,082,641
1884	29,453,427	Total	377,928,600
1885	23,683,992		
1886	24,401,156		

In 1888 there were 345,619 acres in the Gironde devoted to the vine; in 1889, 346,410 acres; and in 1890, but 339,084 acres. These figures are more than evidence of the deadly work wrought by mildew and phylloxera. How much land will, in the next few years, be successfully replanted with new

vines remains to be seen. Growers are apparently hopeful, and the general feeling in the wine trade is a healthy one.

The following summary gives the extent of the crops in this consular district for 1889 and 1890, the average yields per acre, quantity of wine produced during 1889 and 1890, and the average crops for the past 10 years:

Districts.	Total yield.		Average yield for last 10 years.	Extent of vineyards.		Average yield per acre.	
	1889.	1890.		1889.	1890.	1889.	1890.
	Gallons.	*Gallons.*	*Gallons.*	*Acres.*	*Acres.*	*Gallons.*	*Gallons.*
Gironde	47,288,837	35,082,641	34,284,595	346,410	339,084	136.51	103.46
Lot-et-Garonne	4,952,206	5,080,590	8,716,840	140,853	140,182	35.15	36.24
Basses-Pyrénées	2,855,643	3,185,287	3,087,320	61,316	48,231	46.56	66.04
Hautes-Pyrénées	1,469,256	2,018,087	3,082,940	40,190	40,216	36.55	50.18
Landes	6,191,171	6,048,360	4,372,792	45,606	45,233	135.75	111.6

HORACE G. KNOWLES,
Consul.

UNITED STATES CONSULATE,
Bordeaux, April 30, 1891.

LABOR MANIFESTATION IN THE DISTRICT OF ROUBAIX.

REPORT BY COMMERCIAL AGENT ATWELL.

Prior to May 1 there was great apprehension among the manufacturers of Roubaix and in other commercial towns in this district that the labor manifestation would result in serious loss to mill and property owners, as on May 1, 1890, there were labor riots, suppressed only by recourse to military force. In anticipation of trouble, two squadrons of cavalry and six companies of infantry from Cambrai and the Twenty-first regiment of dragoons were ordered to Roubaix, under command of General Bidot, the military quarters being established at the city hall. The Bank of France, post-office, and gas works were also put under military guard. On April 30 the mayor of Roubaix issued a manifesto calling the attention of the public to acts forbidding the collection of crowds in such numbers as to impede free circulation in the streets. Toward noon on May 1 more than 3,000 workmen marched down the main street toward the city hall, having at their head a deputation of 30 delegates to present their petition to the mayor. This petition, signed by a syndicate representing more than 10,000 workmen, consists of an appeal (1) for the reduction of the working day to 8 hours, (2) the recognition of workmen's associations by the civil authorities, (3) abolition of the tax on consumable articles and its substitution by a graded tax on capital, (4) the creation of a public fund for pensioning aged and incapacitated working people. These

delegates were received by the mayor, and then asked that their petition should be called to the attention of the proper authorities, saying that, as an immediate reduction to 8 hours might be too subversive of the existing order, they would be contented for a time with 10 hours, and pointed to England as showing better production, combined with increased health and knowledge among her workmen, as a result of a more liberal policy. Upon receiving the promise of the mayor that their petition would be presented as requested, the delegates retired and the crowd dispersed.

At Sille the situation was quiet, as well as in other towns in the north, with the exception of Fourmies, where there are large spinning works. A rather ill-advised manifesto from a combined association of manufacturers, published on April 30, and the presence of the military on the following day so excited the workmen that an altercation took place between the populace and the soldiers, in which stones were thrown by the former and shots fired by the latter. More than 20 were numbered among the killed and wounded. The discontent of the people in this district is caused by the failure of the manufacturers to observe the laws regulating labor and the low rate of wages. A decree of September 9, 1848, limits the work of adults to 12 hours. Prior to that date 14 and 16 hours constituted a working day. As this decree was not generally observed, a prefectorial circular was issued in October, 1886, impressing upon manufacturers the necessity of compliance with the established law. Notwithstanding this, complaints have been received—and their number has greatly multiplied recently—that workmen in Roubaix repair to the factories at 5:30 a. m. and are released only at 8:45 p. m., having but 15 minutes at noon for lunch and again 15 minutes at 5 o'clock. For this day an expert spinner can not hope to earn more than 96½ cents (American value), the average spinner receiving 69 cents. Weavers are paid by weight, and dyers receive 25 centimes, or a little less than 5 American cents an hour, their wages being lower than those of workmen employed in the manufacture of the fabric.

Although all members of a family above the age of 12 work, when possible, in factories, their combined wages barely suffice to feed and clothe them in comfort.

A house consisting of one small room with an attic above may be had for $1.55 per month; at $3.10 there are houses with two rooms on the ground floor, two rooms above, attic and cellar; at $5.40 a more respectable house with two rooms on ground floor, four bedrooms, attic and cellar may be obtained.

Flour is 5 cents (American value) per pound; bread used by the working classes, 3 cents per pound; poor and ordinary cuts of beef and mutton average 13 and 15 cents per pound, respectively, while good cuts sell at 20; coffee, containing some chickory, 50 cents per pound; butter, 21 and 24 cents per pound; poultry, from 40 cents to $1; and in seasons like the present, succeeding a rigorous winter, fowls of any size command $1.60 and $1.80 each, placing them beyond the reach of even moderate incomes. Ham

is sold at 60 cents per pound (American value), and is never on the table of the workman.

As the population is almost exclusively industrial, there are but few garden farms around Roubaix, and all vegetables are dear, a good-sized cabbage commanding, at the present time, a trifle over 19 cents (American value). Potatoes sell for $1.16 per 100 kilogrammes.

A workman's first meal comprises bread and coffee, the midday meal a vegetable soup and a very small portion of boiled beef with beans; for the last meal bread is crumbed into buttermilk at 3 cents a quart (American value), and the whole thickened with a little flour and cooked into a gruel, unpalatable, but said to be not unwholesome.

Mill-owners admit that more liberal wages could be paid workmen and a good profit still be made on their goods, but no manufacturer holds himself ready to take the initiative, each one averring that he is ready to adopt any concession agreed upon by the whole body of manufacturers.

Workmen in this district now await the result of their last appeal, hoping that the moderation exercised by them recently while laboring under great privation may commend the justice of their demands to those toward whom they look for relief.

W. P. ATWELL,
Commercial Agent.

UNITED STATES COMMERCIAL AGENCY,
Roubaix, May 9, 1891.

THE NICKEL MINES OF NEW CALEDONIA.

REPORT BY VICE-COMMERCIAL AGENT LE MESCAM, OF NOUMÉA.

It has come to my knowledge that several European governments have been making inquiries here concerning the production of nickel ore in this country, and I deem it my duty to make a report on the subject to the Department.

The area of New Caledonia is 2,000,000 square kilometres, and it includes about 800,000 square kilometres of nickel-producing land. About 80,000 square kilometres have already been granted to, or applied for by, divers mining companies, but about 20,000 square kilometres of the land are being actually worked, principally in districts easily reached by sea or rivers. Some of the best claims are not yet worked on account of the difficulties resulting from the absence of roads.

The composition of the nickel ore is hydrated silicate of nickel and magnesia, without any traces of arsenic. It contains from 8 to 10 per cent. of metal, some samples containing up to 16 per cent. of pure nickel.

The value of 8 per cent. ore at shipping places is now 100 francs ($19.03) per ton,* but the price will probably augment. The mines are reported to be inexhaustible.

* The ton used in this report is equal to 1,000 kilogrammes, or 2,240 pounds.

Besides at Nouméa, ships can load at several other ports on each of the coasts of the colony, but foreign vessels have to pay coasting duties of 150 francs per registered ton at any other port except Nouméa.

Vessels coming to Nouméa with loads of lumber from the Pacific coast could get return cargoes of ore and save an expensive voyage to Australian ports. The exportation of ore from New Caledonia during the year 1890 has been: Nickel ore, 5,000 tons; chromate of iron, 1,500 tons; cobalt, 700 tons; gold quartz, 10 tons; and of smaller metals—nickel, 1.50 tons; silver lead, 3.50 tons; copper, 1.32 tons.

The exportation will greatly augment henceforth, for large orders have been received by the Compagnie le Nickel for ore and metal. The Creusot foundries of France alone have ordered 100,000 tons of nickel ore.

Important foundries and furnaces are now being erected in the vicinity of Nouméa for the treatment of nickel ore, and the prospects seem to indicate that at a date not far off this colony will greatly surpass any country in the world in richness and importance of the nickel industry.

L. LE MESCAM,
Vice-Commercial Agent.

UNITED STATES COMMERCIAL AGENCY,
Nouméa, February 13, 1891.

LAND LAWS OF THE ARGENTINE REPUBLIC.

REPORT BY CONSUL BAKER, OF BUENOS AYRES.

PUBLIC LANDS.

All the unsold lands in the different provinces are the property of the respective provinces and subject to sale under such regulations and on such terms as the laws of each one provide. The only actual national lands are those which are embraced in the several territories of the nation, to wit, the Pampa, the Chaco, the Missiones, and Patagonia, and none of this public domain can be disposed of without previous measurement and survey. This is regulated under the law of October 24, 1882, which provides that all surveys shall be made in successive zones, and in ordering surveys the Government is required to select—

(1) Those lands which are contiguous to zones which have already been opened to settlement, either by the provinces or by the nation.

(2) Those lands which are situated on the seacoast or banks of rivers, or are adjacent to ports or roads and ways of communication already opened.

SYSTEM OF SURVEY.

The system of measurement in the Pampa and Patagonia is as follows:

(1) Sections of 1,000,000 hectares (400 leagues of 2,500 hectares each) shall be marked off.

(2) Each of these sections shall be divided into four quarters of 250,000 hectares (100 leagues of 2,500 hectares each), and each one of these shall be subdivided into twenty-five lots of 10,000 hectares (4 leagues) each.

(3) These lots of 10,000 hectares shall be in the form of a square.

PLOTS AND DESCRIPTIVE FIELD NOTES.

It is further provided that the engineers and surveyors commissioned to make these surveys must be named personally by the Executive, and in no case shall the same parties be engaged to survey more than one section. They shall proceed to do their work in accordance with such instructions as they shall receive from the department of engineers, and the reports they make shall be descriptive, indicating the areas most appropriate for agriculture or for the location of towns and colonies, and giving the reasons for their opinions. Upon the receipt of these reports, the Executive shall decide the areas which, for any reason, shall be excluded from public sale. In those sections which extend into the cordilleras of the Andes there shall be made, in addition to the annotations above referred to, exact annotations of all mines, salt deposits, springs and water courses, the height above the level of the sea, and all other matters worthy to be mentioned in each section surveyed. These returns and field notes must be presented to the department of engineers for examination, and a duplicate also to the Executive. Thereupon the department of engineers shall designate the areas which, in their opinion, are to be set apart for pasturage, for agriculture, and for towns and colonies.

In regard to the territory of Missiones, its area shall be subdivided on a different basis. It is to be surveyed into sectiones of 10,000 hectares each, and each of these again subdivided into one hundred lots of 100 hectares each, and in the surveys shall be designated the parts appropriate for agriculture in the manner above stated.

When all these surveys and plats shall have been approved by the Executive, they are then to be lithographed and printed for distribution.

SALE OF PASTORAL LANDS.

In the sale of lands designated for pastoral purposes the law provides as follows:

(1) All sales must be made at public auction, and it is not allowed to include in one auction an area of more than 250,000 hectares.

(2) The area or extent of land annually sold shall not exceed 2,500,000 hectares, or, say, 1,000 leagues of 2,500 hectares each.

(3) The minimum price, as a base for the auction, in the territories of the Pampa and Patagonia is fixed at 20 cents per hectare, or $500 per league, and in the territory of the Chaco at 30 cents per hectare, or $750 per league.

(4) The auction must be advertised not less than 90 days before the day of sale in the capital of the Republic and in the capitals of the several provinces.

(5) The base for each sale shall be 2,500 hectares, or a square of 5,000 metres each side.

(6) The purchaser has the privilege of acquiring not more than 40,000 hectares, or four contiguous lots.

(7) These tracts can only be acquired by those who obligate themselves to settle them, expending within the first 2 years not less than 500 pesos for each lot of 4 leagues in houses and stock.

(8) The payments must be made as follows: One-sixth part cash in hand and the balance in five equal annual payments, the purchasers signing notes for the deferred payments.

(9) If these notes are not paid at maturity, they may be renewed for 1 year at 6 per cent. interest; if then they or any of them are not paid, or if the obligation to settle the lands has not been complied with, the chief of the land office will proceed to sell the same for account of the purchaser at public auction.

(10) The payment of any or all the notes may be anticipated at a discount of 6 per cent.

(11) The auctions of all public lands must take place in the national land office between 12 and 4 o'clock of the days advertised, and one offer is sufficient, provided it is not less than the price fixed as the base of the sale. And the chief of the national land office, assisted by a Government notary, shall preside at all auctions.

(12) For each tract sold the land office gives a certificate on stamped paper, signed by the chief and countersigned by the president of the treasury.

(13) The national land office is required to keep a register, in which shall be noted all lots sold, with a full description of the same, the name of the purchaser, the date of the purchase, etc.

(14) When all the conditions and requirements of the law have been complied with and the entire amount of the purchase money paid, the Executive shall order the Government notary to complete and deliver deeds of transfer to the purchaser.

SALE OF AGRICULTURAL LANDS.

The entire territory of Missiones and such areas as are set apart for agriculture in the territories of the Pampa, Chaco, and Patagonia are designated as farming lands (*tierras de pan*), and they are sold on the following terms:

(1) The surveys, which the department of engineers is required to make, must first be made public and the plans distributed throughout the Republic.

(2) Any person or company can purchase not less than 25 hectares nor more than four lots, say 400 hectares, in the same section.

(3) The sales must be made by application or petition written before the chief of the public land office, who must enter in a special register the day and hour at which it was presented, with a description of the tract solicited. The entry must be signed by the applicant or his attorney.

(4) The price of farming lands in the Missiones and the Chaco is fixed at 2 pesos (or dollars) per hectare and in the Pampa and Patagonia at 1½ pesos.

(5) The payments must be as follows: One-fifth part cash and the balance in four equal annual payments.

(6) The purchasers must sign notes for the deferred payments; but these notes can be discounted and paid before maturity, as in the case of pastoral lands.

(7) The chief of the land office shall deliver to the purchaser a certificate or stamped paper, signed by the said chief and countersigned by the president of the treasury, and this certificate is not transferable.

(8) These farming lands can only be acquired by those who obligate themselves to cultivate, within the 3 following years, at least the fifth part of each tract.

(9) Purchasers who fail to comply with the obligations of their contracts shall, when their notes fall due, be proceeded with, as in the case of pastoral lands.

(10) When all the conditions of the sale have been complied with by the purchaser and the full price of the land paid, the Government notary shall, on the order of the Executive, complete and deliver the deeds of transfer.

GENERAL REGULATIONS.

(1) In all cases of the sale of Government lands the purchaser is not allowed to sell his tract to the adjoining owner until he has fully completed the purchase.

(2) Neither purchasers nor their assigns are permitted to make any opposition to the opening of roads or highways over their lands when the increase of population shall require this,

nor to the running of railways across their lands; nor have they any right to indemnity for ground which may be taken for such purposes, but they have such right in the case of buildings or improvements.

(3) The Government is not allowed to sell lands on which there are deposits of salt.

(4) Lots designated for towns and colonies shall be divided up and sold in accordance with the law for such cases made and provided.

(5) Purchasers of public lands are required to pay the taxes assessed upon the same from the year after their purchase, even though they have not completed the payments.

The foregoing is quite a full résumé of the laws in reference to the sale of the public lands of the Argentine Republic.

EXTENT AND CHARACTER OF PUBLIC LANDS.

In regard to the extent and character of the unoccupied Government territory, it is rather a difficult matter to give exact or even approximate figures. I can only repeat the following table, heretofore compiled by me, which gives the superficial area of the different provinces and territories and the amount of land now estimated to be under cultivation:

Table showing the total area and the area under cultivation in the Argentine Republic.

Provinces and territories.	Area under cultivation.	Total area.
Provinces:	*Hectares.*	*Hectares.*
Buenos Ayres	868,658	31,123,700
Santa Fé	536,537	13,158,200
Entre Rios	136,151	7,545,700
Corrientes	46,631	8,114,800
Cordova	234,395	17,476,700
San Luis	79,630	7,591,700
Mendoza	88,546	16,081,300
San Juan	79,630	9,750,500
Rioja	22,217	8,903,000
Catamarca	44,618	9,064,400
Santiago del Estero	120,400	10,335,500
Tucuman	35,943	2,419,900
Salta	38,525	12,826,600
Jujuy	18,994	4,528,600
Territories:		
Missiones	4,606	5,395,400
Formosa	600	11,567,100
Chaco	3,623	12,483,400
Pampa	5,964	14,491,900
Neuquen	.....	10,908,100
Rio Negro	1,291	21,216,300
Santa Cruz	.....	27,691,000
Chubut	.....	24,733,100
Terra del Fuego	.....	2,104,800
Total	2,359,958	289,429,841

Of the lands not under cultivation or pasturage in the different provinces, it is not possible for me to say how much is in the hands of purchasers and how much is still owned by the provinces. There is no doubt, however, that the greater part has already been sold to private individuals or speculators, and that the character of what remains is not generally adapted to farming purposes.

Of the territories designated above, it is necessary to explain that Formosa is a part of the Chaco, and that Neuquen, Rio Negro, Santa Cruz, Chubut, and Terra del Fuego comprise what has heretofore gone under the name of Patagonia. Of these territorial areas the greater part is still in the hands of the National Government. The lands of the Chaco, Formosa, Missiones, and the Pampa are, to a large extent, suitable for farming, while it is only in certain localities that the territories of Patagonia are suitable either for farming or pastoral purposes, a very large proportion of that region being without water and without grass, and hence almost valueless for any purpose.

MISCELLANEOUS.

There are no preëmption or homestead laws in the Argentine Republic. Except where such lands are specially designated and excepted on the plats, there is no distinction in the sale or settlement of mining, timber, mineral, or agricultural lands. There is no distinction made in the public land laws between citizens and aliens.

Whatever measures have heretofore been adopted by this Government to encourage immigration, they have, since the present crisis set in, been entirely annulled on account of the straitened condition of the public finances. During the days of free passages there was a tremendous spurt in the immigration to this country, the number of arrivals in 1889 amounting to upwards of 250,000; but, owing to the general collapse which now exists in all departments of trade, labor, and business, the efflux during the last year has been greater than the influx, and now everybody that can of those who came here to make sudden fortunes is leaving the country. Nearly three-fourths of the immigrants to the Argentine Republic in past years have come from Italy, the rest from France, Spain, and the countries of northern Europe. As a general thing, the character of the arrivals from the regions of the Mediterranean Sea is good. Indeed, to them any change from the overcrowded centers from which they depart is for the better, and, with their well-known habits of economy and thrift and utter indifference to disagreeable surroundings, they soon emerge from their utter poverty and take better positions in every department of handicraft and labor, and, at once accommodating themselves in language and habits to the natives of the country, they soon assimilate and become absorbed. With the people of the United States and Great Britain, however, it is different. The difference of language and difference of customs are almost fatal to any improvement in their condition, and, unless they come with money, which in any country will command success, they soon become discouraged and fail to get along. To Americans especially I say, let well enough alone, and by all means do not think of coming to the Argentine Republic in any hope of improving your condition.

E. L. BAKER,
Consul.

UNITED STATES CONSULATE,
Buenos Ayres, April 27, 1891.

NATIONAL AID TO ART.

REPORT BY CONSUL LOOMIS, OF ST. ETIENNE.

The French Government is not only actually engaged in the development and fostering of the fine arts on its own account, but it is making a series of studies on the subject of the policy of other nations in respect to the encouragement of painting, sculpture, music, and the drama.

M. O. Fedière, for a long time attached to the Luxembourg Museum, in Paris, was recently dispatched by the French minister of public instruction to make a careful study of the question of Government aid to art in Great Britain.

His official report is an interesting and seemingly accurate one, and I have appended a condensed translation of it.

M. Fedière explains in detail the British system of fostering the fine arts and indicates some of the salient points wherein it differs from the administration of the fine arts in France.

FRANCIS B. LOOMIS,
Consul.

UNITED STATES CONSULATE,
St. Etienne, May 15, 1891.

THE FINE ARTS IN GREAT BRITAIN.

[Inclosure in Consul Loomis's report.—Translation.]

It is difficult, if not impossible, to establish a parallel between the English and French system of encouraging the fine arts by means of national aid. The French system, established immediately after the revolution, possesses a homogeneity and freedom vainly sought for in England, where the fine arts are subjected to the restrictions of certain traditions, some of which are obsolete, being, indeed, of mediæval origin. Furthermore, whereas in France the State claims all the institutions, the English Government abandons willingly everything that might be left to private enterprise. Consequently, in England there exists no minister of fine arts, nor a minister of public instruction, properly so called. This does not mean, however, that the English Government takes no interest in these institutions; but, on the contrary, art and education are the objects of special solicitude, and their fostering gives employment to a large number of persons. In order to control in a measure the development of the fine arts, since there is no special ministerial department, the plan of placing them under the control of a private committee is adopted. In this way there exists a committee forming a court of appeal called "the judicial committee of the private council," another of commerce styled "board of trade," and, finally, a committee which presides over education and the fine arts, to which the name of "committee of council on education" is given. The head of these committees is, officially, the president, but the real head is the vice president of the council. All questions relating to education and the fine arts are referred to him. He is assisted by a central administration, sitting permanently in London. This administration is subdivided into two great sections or departments, of which one presides over education and the other over sciences and arts. This latter is called "the science and art department." This department has under

its direction the elementary schools of sciences and art, the mining and geological schools, the South Kensington Museum, and certain other establishments which owe their existence to the Government. But the British Museum and the National Gallery enjoy a certain autonomy, and are controlled by special committees.

The rôle of the Government in respect to these institutions is limited to grants of money, which, however, are very insufficient. The expenses provided for by the budget of 1890–'91 amount to £474,896, distributed as follows:

Central administration	£29,059
Salary of professors of sciences	113,072
Salary of professors of arts	47,432
Expenses common to both departments	60,907
Grants to students	58,912
Grants to museums	86,714
Grants to schools of science and art	78,800
Total	474,896

In this sum the amounts allotted to the British Museum and the National Gallery are not included, as well as to some other independent institutions, and consequently these subsidies may be added:

British Museum	£155,145
National Gallery	14,594
Gallery of National Portraits	2,209
Grant to Royal Academy of Music	500
Grant to Irish Academy	500
Total	173,348

The head of the department is an officer who bears the title of secretary and whose salary amounts to £1,500 a year. The director of the arts division has £925, while there are 44 clerks receiving salaries amounting in the aggregate to £8,186.

This department regulates questions relative to (1) the teaching of fine arts (schools of fine arts, Roman school, school of design, etc.); (2) exhibition manufactories, purchase of pictures for the National Gallery, grants to theaters, etc.; (3) museums and historical monuments.

SCHOOL OF FINE ARTS.

The State, except in the case of primary artistic education, leaves to private initiative the care of forming painters, sculptors, and musicians, and the only school is that of the Royal Academy, which is a private society.

The State gives no grants to theaters, nor does it organize any artistic exhibitions; but the importance of those undertaken by private societies each year has been such as to deserve the term of national institutions, the principal of which are the Royal Academy Exhibition, the Royal Society of Water Colors, the Institute of Water Colors, the British Society of Arts.

Each of these societies has two exhibitions yearly—one in winter, the other in summer. The society bears the expenses of its own exhibitions and receives a percentage on every picture sold. Besides these societies, there are commercial societies which organize with a good deal of success annual exhibitions, such as the Grosvenor Gallery and the New Gallery. Both of these societies have rendered good services to art in allowing artists of slight fame to expose their works.

None of these exhibitions give prizes, and the State does not buy the productions of living artists.

The Royal Academy possesses a fund for the purchase of modern pictures. This fund was placed at its disposal by the celebrated sculptor Chantrey, who in dying decided that his fortune, exceeding £100,000, should go to the academy after the decease of his widow, in

order to buy each year a picture from an English or foreign artist, provided that the said picture was executed in England.

PRESERVATION OF WORKS OF ART.

In the case of museums, England need not be jealous of other countries. The National Gallery, the British Museum, and the South Kensington Museum are too well known to require any comment of praise.

The British Museum.—The British Museum dates from the second half of the last century. About that time a doctor, Sir Henry Sloane, lived in London, and at his death he bequeathed to the State a rare collection of books, curiosities of a varied nature, and a whole roomful of natural history. He died in 1753, and the State accepted the gift, and Parliament passed an act authorizing the acquisition of this collection, as well as that of the manuscripts formed by Robert Halley and the library of Sir John Cotton.

A national collection was thus at once formed, but a place to put it in was required. A second time Parliament was appealed to, with the result that a lottery was organized to defray the expenses of the site of the present museum. From this moment gifts flowed in and legacies were left, so that in 1843 the museum had to be enlarged to its present proportions. The British Museum is divided into the following departments: (1) books, (2) plans and charts, (3) manuscripts, (4) oriental manuscripts, (5) designs and impressions, (6) Egyptian and Assyrian antiquities, (7) Roman and Grecian antiquities, (8) British and middle-age antiquities, (9) coins, medals, and natural history. The museum is administered by a committee of fifty trustees, of whom one is appointed by the Queen.

Royal Academy of Arts.—The Royal Academy was founded within the reign of George III, in 1768. In the month of November of that year a number of artists addressed a petition to the King, asking his support for the creation of an institution to encourage art and design. A month later the King approved the petition by founding the Royal Academy, which from that time has been administered with increasing success. Its aim is to give gratuitously tuition in painting, design, and architecture and to organize an annual exhibition in London. Its revenue is derived solely from these exhibitions, which are much patronized by the public.

The society is composed of forty academicians, who elect amongst themselves each year a committee of ten for the control of the institution. Each member must, within 6 months after his election, present to the academy one of his productions. The members form the jury for the admission or refusal of works to their exhibitions and distribute no prizes. The only privilege which the exhibitor enjoys is that of free entry to the exhibition and to the lectures at the school. For the public the admission fee is 1*s.*

The School of Art of the Royal Academy.—For the teaching of the fine arts properly called there is in England but one school, that of the Royal Academy. This school was founded in 1768, and has a class for the study of antique models, a preliminary class of painting, a high class of painting, a class for the study of the nude, a class of sculpture from living models, and a class of architecture. An art library is open to students, and each year a course of lectures is given by competent professors. During the first 3 years of study the students are obliged to follow these lectures.

Before being admitted to the school the candidate must furnish a specimen of his capabilities. The instruction given in the classes is absolutely gratuitous, the students being only asked to furnish what instruments they require.

The National Gallery.—The National Gallery was founded in 1824. In that year the Government bought, for the sum of £57,000, the collection of a rich banker, consisting of thirty-eight pictures by the old masters. This was the beginning of the superb museum so much valued to-day. Two years later Sir G. Beaumont presented to the gallery fifteen pictures of great value. The example was rapidly followed by others, and soon funds were voted by the Government for the purchase of paintings, and, when these funds were insufficient, private persons came to the relief of the gallery. It was thus that a picture costing £55,000 desired

for the gallery was obtained when the Government refused to offer more than £24,000. Three gentlemen promptly gave £10,000 each and the treasure was secured.

The National Gallery was at first situated in Pall Mall, but in 1828 the present building was constructed at a cost of £200,000 in Trafalgar Square.

The control of the gallery is in the hands of six trustees, who have under them a director with a salary of £1,000 a year, a secretary paid £875, and a staff of thirty-six curators and employés of different ranks.

The National Portrait Gallery.—This collection, which is installed in Bethnal Green, owes its origin to Lord Stanhope, who conceived the idea of assembling in one place the authentic portraits of the most distinguished persons of the century. Sovereigns, statesmen, generals, men of letters, and artists figure in this gallery. The number of portraits exceeds eight hundred and eighty, of which more than half were presented by private persons.

The South Kensington Museum.—This museum is one of the largest in the world. It is well organized and lends out to provincial schools many subjects of natural history or works of art.

Theaters and singing schools.—No theater in the United Kingdom receives a grant from the State, nor is there any conservatory of music. However, the Royal Academy of Music replaces advantageously a conservatory. It receives an annual grant from the Queen of £500. Students are required to pay £30 for the session of 9 months.

CONCLUSION.

Such is the information I was able to procure in prosecuting my inquiries, and by it it may be seen that the English employés are much better paid than our own (French).

The salaries for corresponding services are from 75 to 100 per cent. higher in England than in France. I find, also, that the English Government is powerfully seconded in its efforts by private subscriptions. It is to this latter source that England owes the most of its institutions of art, and it is to it that the country has recourse when a pecuniary effort is necessary. Another fact to be observed is that the administration of fine arts in England centers all its efforts in preserving works of art, paying but a secondary attention to education.

England gives facility to the art student to acquire the first notions of the subject, multiplies the models in the museums destined to form his tastes, but proceeds no further. The artist is obliged to shift for himself without the hope of receiving any decoration or pecuniary encouragement, which is the reverse of the system that obtains in France.

Trade at Tuxpan.—I have, in this report of the quarter ended March 31, 1891, to state that commerce is progressing favorably, the exports during this quarter amounting to the sum of $45,390.57, which exceeds the corresponding quarter of 1891 by the amount of $19,878.31. The imports of lumber and general merchandise continue increasing, although the correct amount is not obtainable.

Finance and exchange are, as heretofore, carried on by a few merchants doing business with New York houses, exchange ranging between 20 and 25 per cent.—JOHN DRAYTON, *Consul, Tuxpan, April, 1891.*

TRADE AND COMMERCE OF GUATEMALA.

REPORT BY CONSUL-GENERAL KIMBERLY.

This report is specially prepared with the view of once more calling the attention of the merchants and manufacturers of the United States to these countries and to urge upon their serious attention the business situation of the vast section of country embraced in these five republics of Central America. Notwithstanding all past consular efforts, the average business man of the United States is practically ignorant of the real situation. If otherwise, how is it possible that of the $9,000,000 or $10,000,000 of importations to the Republic of Guatemala alone, and which is steadily increasing, scarcely 10 per cent. comes from the United States. That such a condition of affairs can exist is a great surprise to me. Knowing so well the characteristic and ingenious enterprise of the average American business man, I can not comprehend how such great opportunities right at his door can escape his attention.

It can be safely said that there are no products of American enterprise or industry but would find ready and eager sale in these markets. Dependent, as they are, entirely upon other nations for every article of manufacture and use entering into the needs or necessities of ordinary life, they accept with avidity any conditions which supply their own native deficiencies.

In my many visits to the warehouses and stores of the average merchant of Guatemala I was surprised to find—and it is no uncommon sight to see—as high as $200,000 worth of goods in stock, scarcely a merchant of note carrying less than $50,000 worth in their stores. These stocks are generally of a mixed character, including everything denominated as general merchandise, it being rare that any line of goods is exclusively sold, except, perhaps, dry goods; and I may say that many of the stocks in this line will compare in magnitude and variety with those of the more extensive merchants of our own large cities, and which comprise fabrics from the looms of every nation, but, I am sorry to add, only a small portion from the United States. This is a sad showing, equaled only by my surprise that such an extraordinary condition can obtain. A part of our own continent; one continuous line from the great State of California, a stream scarcely separating it; extending southward to the Isthmus, to which come the steamers of the Pacific Mail Steamship Company and merchant ships from New York; and on the northern coast of Guatemala, on the Caribbean Sea, only 4 days from New Orleans, is Livingston, a seaport town of the Republic, about 190 miles from its capital, the city of Guatemala—all lying so near the harbors of San Francisco, New York, and New Orleans, whence may be shipped those products of the mechanical and industrial ingenuity of our country. Yet the nations of Europe absorb this vast and growing trade. It may be in a measure due to the fact that our people have been so busy since the late civil war in building up our waste places and industries that

they have had no time for reaching out this way; but this must necessarily change, and the increasing volume of products may force them to look for other points of outlet. It can scarcely be, as one of the causes, apprehension of the financial standing or credit of these merchants, for I have discovered that business failures are exceedingly rare, and fraudulent business failures are unknown here. In fact, the laws of this Republic are of such a stringent character that one having failed in business must show to the legal authority that he has fully paid off all previous liability before he can recommence. The merchants, and especially the larger houses, are, as a rule, thoroughly strict and reliable, and are composed of all nationalities, the Germans, however, predominating. These facts have come to my knowledge during the few weeks that I have been here as consul-general, and so earnestly have they impressed me that I have lost no opportunity, even from my arduous office work, to ascertain the causes and find, if possible, a solution of this problem.

At first it seemed perhaps probable that the recently unsettled affairs of these Governments would in some measure account for it. This can not be, however, for the importations are steadily increasing from Europe, showing, evidently, that no such apprehensions are felt there; and the fact is that, apart from the control of the imposts and fixing the duties on exports and imports, these Governments seem to be separate and distinct in their respective trade and business affairs, the great element of trade coming directly from the necessities of the people themselves, and, like all nations of primitive habits, they are lavish in their expenditures and rarely quibble about prices. I find, also, the business system generally adopted in selling goods is cash, and when otherwise it is for good reasons. The people seem busy and prosperous, and need the very articles in which our manufacturers most excel. These people go to the other side of the world to buy, and for the most part pay big prices for flimsy and poor imitations of American goods. I observe, for example, cheap imitations of our sewing machines, Smith & Wesson and Colt's firearms, Collins's cutlery, and American hardware generally, with which the purchaser is deceived and the American article injured beyond measure, imitating even the trade-marks of our eminent manufacturers, whose products have a world-wide reputation. The merchants here, regardless of nationality, deplore this condition of things and frankly admit the great superiority of American goods. When asked the cause of their not buying our products, they say no effort is made to sell them. They also complain of high freights and bad packing, all of which slight causes could be readily removed.

What may be, in my opinion, another important factor in the matter is the class of commercial travelers visiting these countries and the great distinction in their usefulness. For example, the agents or travelers who come from Europe—and very many do come—are invariably intelligent, polished men, speaking Spanish in addition to their own language, and their polite insidiousness accounts, to a great extent, for existing trade conditions. On the other hand, the very few who have come from the United States—and

these mostly from California—are, for the most part, youngsters, speaking English glibly enough, but there it ends. These drummers find themselves, for the first time, perhaps, encountering obstacles such as they never before encountered, get discouraged, and return to what they term "God's country." The foreigner, in the meanwhile, progresses steadily in his efforts, and, when he returns to his employers in Europe, takes orders in his possession frequently amounting to as high as $200,000 at a time.

A little more than a month after I came, and with these thoughts crowding upon my mind, I addressed a series of letters to several business men having large interests here, for the most part Americans, requesting them to kindly assist me in the solution of these questions, and, as they were all of the same character of letters and their responses about the same in substance, I will inclose but two, which, in my opinion, cover all the desirable points.

I. MR. C. W. CARRINGTON TO CONSUL-GENERAL KIMBERLY.

GUATEMALA, *November 17, 1890.*

MY DEAR SIR: Your paper of the 12th instant is at hand, and I shall endeavor to give you a correct idea, as far as it is possible to do so, relative to commercial connections of the United States and Central America. I shall try to answer separately each and every question which you ask, and believe by doing so I can give about the true state of affairs in better and more concise form than in any other way.

Your first question was: "Have the merchants of the United States ever made any determined effort to control, or even sell, their goods, etc., here?"

In reply to the above question, I can only say that, with perhaps a few exceptions, absolutely no effort has been made. We receive now and then catalogues printed in French, English, and Spanish, and of late a few houses have sent traveling men down here; but of this I shall speak later on. The efforts which have been made, as stated, are insignificant in comparison with the amount of business which is done here, and, in fact, if I should ask the average jobbing house or manufacturer in the United States, "Where is Guatemala?" in all probability I should receive the distinct answer, "Somewhere in Central America." Should I ask for particular information, I am satisfied the average merchant can tell me more about the mountains of the moon than about the condition or state of commercial affairs of Guatemala.

In the last 12 months a few houses have sent travelers here; for instance, the drug house of Lanman & Kemp, the only one which sends travelers from the United States, had a man here for some time, who sold on his last trip of about 4 months a trifle over $600,000 in these five republics.

As regards credits, which are so often refused by the United States merchants to these countries, our countrymen, by doing so, only show their ignorance, improbable as it may seem. We have had no failure of any important house in this Republic for 8 years. Furthermore, the laws of the country are such that fraudulent failures are almost unknown here, and these matters are only too well known by our European friends, and 6 and 9 months' terms are offered right and left from all European countries. But the terms which rule in the United States, namely, 3 and 4 months on average merchandise, are not a drawback to the United States, as it takes less time for goods to arrive here from New York than from Europe, which is also a decided advantage readily understood by any merchant.

Your next question, "What present advantages, if any, exist why the European markets should control this trade?" is a very simple one to answer.

It is simply a question of supply and demand—not that the United States could not fill the demand, but Europe has the upper hand here, for reasons which are perfectly natural. In the first place, Europe is only too glad to sell to merchants here. They send travelers, manufacture

goods to suit the tastes, requirements, etc., of climate, country, and people; in fact, of about $8,000,000 worth of merchandise which is annually imported to Guatemala alone—and this year will be considerably more—the United States is a very small factor, indeed, and for the reason either that the United States merchant does not care for the trade down here or, which I believe, he is too ignorant of the fact that there is a country which only would be too glad to buy from the United States in great preference to Europe, especially as those goods which we do sell give a great deal better satisfaction than most of the European goods. Especially in this line I might mention hardware. Another drawback to our United States merchant is that those who do send catalogues here with prices—I have reference to machinery, hardware, etc.—send what are known in the United States as catalogue prices and subject to a discount of from 10 to 50 per cent. In other words, the merchant of the United States pursues the same methods of doing business down here as at home. The average merchant down here is not American, and he looks at the prices from the United States, compares them with European prices, and, while he very often prefers American goods, the difference is apparently so much between wares from the United States and Europe that he sends his orders to Europe, owing to this peculiar American system of discounts from catalogues. The fact is that, if merchants in the United States are under the impression that the merchants down here are more or less fools, the fools will be in the United States and not here.

Your following question was: "Is it so, as I understand, that American merchants pack their goods so badly as to be unable to undergo the rough usage, hard handling, and the petty pilfering of packages en route from bad packing?"

I can only answer that the average packing from the United States for these countries is decidedly bad. Our firm at different times wrote and stated to houses from whom we ordered goods, "Please pack so-and-so," yet the majority of houses will not follow instructions; hence merchandise shipped from the United States is in general very badly packed, to say the least. The average house there packs merchandise for Central America as if the goods were going from New York to Chicago, instead of here; and it is to me positively amusing when we receive once in a while a box marked "Handle with care," as the general language down here is Spanish and not English, and the laborer on the railroads and wharves in Central America is no better educated than anywhere else, and is not exactly a linguist who speaks three or four languages, and half the time can not read even Spanish. All goods which are shipped to these countries must be more than carefully packed. I shall give a description of a case being shipped from New York to Guatemala city, then the merchants in the United States will probably understand why and wherefore goods must be packed differently and more carefully than merchandise shipped to any part of the United States. The box leaves the Pacific Mail wharf in New York and is loaded from the Pacific Mail steamers on the Atlantic side on a lighter; from the lighter it goes to the wharf, to the Panama Railroad; on the Pacific Ocean side from wharf to lighter again, and from lighter to the steamer of the Pacific Mail Company. Here goods are transported to ports on the Pacific Ocean side. After about 8 or 10 days the box arrives at San José de Guatemala harbor, is once more put on a lighter to the wharf of the La Compañia de Agencias, from the wharf to the railroad, and from the railroad to the custom-house, which is rather small for the amount of business done there, and boxes are not handled with gloves. Taking now into consideration that the surf on the Pacific Ocean side is very strong, and no steamer can land at the wharf of any harbor, with the exception of one—Corinto, Nicaragua—it is easy to understand that, when merchandise is handled so much, cases loosely packed will arrive in a bad state, and often some of the contents are stolen or lost through bad packing, for which nobody seems to be responsible; and many merchants here will tell you, "We do not buy goods in the United States because they do not know how to, or will not, pack the way they ought to be packed." Furthermore, a great many goods in Guatemala and all over Central America are transported by mule or carrier to the interior. While some merchants may order goods to be packed in a manner which apparently may seem ridiculous to a merchant doing business in the United States, these instructions as to packing ought to be invariably followed to the letter.

Your next question was: "Is it true, as I am told, that steam freights between the United States and these republics are so great that it is cheaper to buy abroad?"

As regards freights from the United States, the United States are at a decided disadvantage. The freights from New York to San José de Guatemala are double what they are from Hamburg, Germany, for the reason that out of Hamburg two lines run to Panama, which are continually fighting each other, and from the United States we have but one line, the Pacific Mail Steamship Company. The charges of the Pacific Mail Steamship Company, considering mileage, etc., are not exactly excessive; they are high, but the expense is in proportion. But charges of lighterage, wharfage, and railroads in Guatemala are out of proportion to the freight charges on the Pacific Mail. It will pay any merchant in Central America to ship bulky goods from New York to Hamburg and have them at the latter place reshipped to Central America. The freight charges from New York to most of the ports on the Pacific side of Central America are 75 cents (gold) per square foot; from Hamburg for same measurement, 1 mark (24½ cents); so arguments are out of place, and from our standpoint as merchants we can simply do nothing; but if the United States desire trade down here, it can not be got solely by big words and what is called in the United States "taffy."

The merchants all over the world will buy wherever it is possible to buy to their advantage. We have been more than once forced to go to Europe to buy goods, solely for the reasons which have already been enumerated.

As to your last question, "Are those obstacles blamable or traceable to any individual or corporation?" I can only say that our representatives here might have taken the subject in hand long ago, and also the United States Government should see that the CONSULAR REPORTS are distributed among the business men in the United States. The average business man in the United States, as I know from my own experience, will not take the trouble to look for the CONSULAR REPORTS, especially as business was good enough in the United States in years past without going out of the United States; but at the same time I may truthfully assert that no country offers such inducements as Central America to industrious, sober Americans. The climate, with the exception of the coast, is healthy, the soil is the richest that ever came under my observation, and anything will grow almost anywhere. Guatemala, with the exception of about 15 miles inland from the coast on either side, is from 3,500 to 7,500 feet above the level of the sea, and for scenery and richness of soil it beats any country in the world.

In conclusion, permit me to say that this country (Guatemala) exports about 600,000 quintals (100 pounds to a quintal) of coffee, of a relative value of about $20,000,000, the most of which goes to England and Germany. With a little effort or push intelligently used, I believe the United States not only could have considerable of this trade, but could positively control it.

Wishing you success, etc.,

C. W. CARRINGTON,
Of Miller & Co., Bazar Americano.

2. MR. THEODORE PASCHKI TO CONSUL-GENERAL KIMBERLY.

GUATEMALA, *December 4, 1890.*

DEAR SIR: The questions which you kindly put to me in your letter of the 14th of November are exceedingly pertinent regarding the subject upon which you wish to be informed, and, lacking the practical training of a merchant, I always have hesitated, and still hesitate, to give decided opinions upon such a vast subject; still, if my views, based upon the observations made through a period of some 6 years, during which I had the opportunity of traveling over a great part of this Republic, can be of any utility in bringing about a better showing in favor of American exports to these countries, I consider it, indeed, an exceedingly pleasant duty to give them, leaving it to the keen and practical judgment of the American merchant and manufacturer to sift them, that he may find, perhaps, a grain or two of some value to him.

Nos. 1, 2, and 3 of your questions are so closely related to one another that I will answer them collectively.

It is a matter of history that the countries of Central America are some of the oldest settled by Europeans, and therefore only a natural consequence that the markets of these countries should have had a demand for European industrial products long before the American manufacturer thought of exporting, he being kept exceedingly busy with the demands of his home market.

Under such conditions that the European manufacturer has cultivated and fostered close and intimate commercial relations with these countries, and consequently controlled their markets, is not surprising, but perfectly natural. It is only of a comparatively recent date that the American industries have developed such efficiency in their quantitative productions, exceeding the home demands, that their attention has been called to other markets besides their own.

Following this line of thought, the difficult task to dislodge the Europeans in their control of these markets becomes perfectly plain, more especially so when we take into consideration the superior experience, and therefore the greater acquired tact, of the European exporter in dealing with his customers across the water over his younger, pushing, but less-experienced rival.

It is said "there is a knack in every trade." The trade of exporting has also its "knack," and to acquire this knack should not be so very difficult to the wide-awake American merchant. In the first place, it is necessary to study the ways and manners of our successful competitors or rivals thoroughly, and then go one better on them. As a general thing, it may be taken for a fact that most of the existing larger foreign business houses here are the outgrowth of some agency or branch from a larger European house, started by a junior partner, a relative, or otherwise trusted employé. Others have been started by young men who had been sent out by the mother house and served for some years faithfully as clerks, and, being of a deserving, energetic, pushing character, established themselves in business.

That under such conditions a long-credit system should spring into practice is perfectly natural, and that it is a safe one is proven by the general prosperity of the merchants here and the entire absence of business failures. During my 6 years' observation I have failed to note one single commercial failure.

Another notable consequence of these conditions has fallen under my notice, which is this, that a good many young and energetic men, having accumulated a modest fortune in the course of a few years, retire from business here, return to their native country, set themselves up as commission merchants at home, and, being possessed of a thorough knowledge of these markets, as well as the confidence of the merchants here and the manufacturers at home, become powerful factors in the furtherance of still closer relations between the two.

But the European manufacturers and merchants, not content with this state of affairs, display a further activity and tact in sending out their army of solicitors, or traveling agents. These agents are, without exception, far superior to their American rivals. In the first place, they are mature men, speaking fluently three or four languages; they have attained all the social accomplishments which enable them to move with éclat in any society; and they can philosophize as agreeably with their should-be customers over a bottle of wine as they can win the good will of the ladies of the merchants' households at an evening party.

On the other hand, when we look at his American brother, we are forced to admit—no matter how bitter the pill may be—that he is not the equal of his European rival, and therefore can not expect to cope successfully with him. As a general thing, he is a young man scarcely out of his teens, speaking no language except his mother's tongue, possessed of a great confidence in himself and his own importance, it is true, but cherishing a hearty contempt for anything that is foreign to him, and not at all backward in expressing it at the slightest provocation, and ever ready to force upon his should-be customers his own views and notions of things in general.

The people of the Latin race are proverbially and truly a very polite people, and, if approached in their own manners, are exceedingly easy of access; but, as a general rule, they are a very conservative people with a love for slow and tedious bargaining.

Now, further, to say that the European merchant is ever studying and trying to exactly supply the special demands of these markets would not be entirely proper; he has it far easier. We will be nearer the truth when we consider that the consumer of Central America from the beginning has been educated by the Europeans what to consume; of course, with a due consideration not to depart too rapidly from any fixed and strong habit or custom of the people.

The great masses of the consumers, the Indians, have become so attached to the form, shape, and quality of European products that they have become familiar and dear to them, and, conservative as they are, are loth to exchange them for other shapes and forms, no matter how superior they may be in quality; and that the majority of American products which could be introduced here with advantage to both buyer and seller are really superior in quality is admitted by all impartial (even European) merchants here.

This is especially true of the article of largest consumption. I refer to cotton woven goods, unbleached cotton particularly. The European article is usually of very inferior quality, heavily impregnated with some earthy matter to give it a strong, stiff appearance, but made up neatly in pieces of 9 or 10 yards each, tied with a red ribbon, the trade-mark upon it, and in most cases embellished with a gaudy picture. The average buyer—usually an Indian—never questions the measurement of the piece, has implicit faith in the red ribbon as evidence that the piece is entire and of customary length, and will look dubiously upon any fabric which is not made up in a similar manner.

Such cases have frequently come under my observation, and I have tried to convince the same Indian that it would be to his advantage to take the same number of yards measured, cut, and packed up before his eyes from an American manufactured piece 60 yards long, of a far superior quality, without the foreign earthy matter in its meshes, and costing only a trifle more, but with no avail. The Indian would shake his head, stick to his original package, load himself with the foreign earthy starch matter, which, after the first washing, would leave the fabric like cheese cloth, and be content and happy in the belief of having had the best of a good bargain. There is no doubt, if the American cotton manufacturer will take this to heart and govern himself accordingly, that he soon will have full control of these markets.

Another very interesting class of American exports is the different agricultural implements, such as axes, hoes, machetes, or brush swords, picks, etc. Every intelligent and impartial observer admits that the American make of any of the above-mentioned articles is infinitely superior in quality and form to the European article, and still the Indian, from long-acquired custom, sticks to the clumsy European sheet-iron hoe and the primitive European-shaped ax.

If we examine the American ax carefully, we will find that its shape, the form of its handle, etc., are the result of a close study by an eminently practical class of people in the art of wood-chopping; yet the conservative Indian, educated to the use of the European ax, will shake his head at being shown the American article; probably he will try a few strokes with it, but lay it down and reach for the European ax without an adjusted handle, go to the woods, cut a rough stick from a tree, insert it as a handle, and go to work chopping, thinking that he can not be fooled with the outlandish-looking American ax.

Here it would not be amiss to mention and hold up as an example worthy of imitation by others the American house of Collins, manufacturers of edge tools, whose wares, especially their brush knives, are known and appreciated by every intelligent planter in Spanish America. In spite of the higher price of these goods, there are not a few, especially foreign, large planters who will buy them in preference to all others. Their laborers are more contented and accomplish more work with them than with the European article. The Collins goods are making a good inroad upon these markets by the house pursuing the simple principle of furnishing only a superior article in every respect and adopting such shapes and forms as the people of each section are accustomed to, but always improving them somewhat—never enough to arouse the suspicion of the consumer that it is an entirely new departure. Among other things, I have noted European-shaped, but Collins-made, axes, which are highly appreciated by the Indian who has once used them; but still by far the greater bulk of all such agricultural implements

sold come from Europe, for the reason that they are offered cheaper. The individual Indian selects them from force of habit and the small native planter from motives of economy.

As to the fourth question, concerning the imperfect packing of goods by our American merchants, to simply call it "imperfect" is putting it much too mild; "abominable" would be a more fitting term for it. There is not a single merchant here who does not complain about the imperfect and wrong packing of American goods, for it is not sufficient to make the packing strong enough so that the goods will stand the extremely rough usage and hard handling to which all are exposed and secure them against the petty pilfering on the way, but there is another far more important defect to be observed in the packing of American goods, a defect which in some cases really acts with prohibitory consequences on their import to these countries. The tariff on imports in these countries is, as a general rule, made up in an exceedingly primitive way as yet. The duty on a majority of goods is levied on the gross weight of the package, and it is clear that by close attention to the peculiar provisions of such a tariff much more favorable results to the importing merchant may be brought about than by ignoring and disregarding these conditions entirely, as is generally complained against our American packing.

This is really an important matter, and the attention of our would-be exporting merchants can not be called too strongly to a close observation of these two.

Yours very truly,

THEODORE PASCHKI.

The foregoing interesting letters, together with the following extract from our United States consular agent at Livingston (dated December 14, 1890), whose knowledge and experience lend his words great weight, should meet with the earnest attention which they deserve and the careful consideration of every house desiring to do business in these states.

The following is the extract above alluded to:

Imports.—The principal articles of import are flour, pork and pork products, and coal oil. The value of the manufactured articles imported is inconsiderable. The great bulk—say nineteen-twentieths—of the imports comes from either England or Germany. The reason for this condition is easily understood. The trade of this coast is almost entirely in the hands of German merchants, who, aside from patriotic motives, prefer to purchase their goods where the requirements of their trade receive thoughtful and careful consideration, and even the packing of the goods is carefully adapted to the rough means of transportation of the country. There is no question about the superiority of American goods, but the American manufacturer labors particularly to satisfy the needs of the United States markets, and the comparatively small volume of Central American trade is not a sufficient inducement to him to change methods of doing business.

Exports.—Our principal exports to the United States are coffee, bananas, rubber, hides, and sarsaparilla.

It is not necessary in marking merchandise that the Spanish language should be used or "Handle with care" put on it, for, if packed carefully, the goods will stand even this rough usage. All the letters I have received as responses to my questions are of about the same character as the foregoing.

If I were asked the question, "What class of goods would meet with most ready sale?" I would, in a word, say: "Anything, everything; canned goods of all descriptions, hardware, notions, dry goods, farming implements, household and decorative furniture, boots and shoes, hats and caps, books in the English language, stationery of all kinds, the products of our large western dairies and packing houses, such as butter, lard, hams, shoulders, sides, breast pieces, dry-salted and smoked meats, etc." I can only say that these repub-

lics contain about 3,000,000 people needing all these things and are fully able to pay for them. This city of Guatemala contains 65,000 inhabitants, many of whom are millionaires, whose homes are palaces. Our people should remember that the best coffee in the world is grown here, and in large quantities, producing immense revenues for their owners and governments. This money is necessarily disseminated, falling into the hands of the people, who in turn desire to purchase those things useful and necessary to life.

I shall now enumerate such commodities as, I am satisfied, would meet with ready and lucrative sale, not only in this city, but in these republics generally. English books, literature, and periodicals are in much greater demand than these Spanish-speaking countries would seem to warrant. Those in need of such—and there are many besides Americans and English—must send abroad for them and wait a tediously long time before they are received. The tailors of this place are very good, and their stock and work will compare favorably with those of our fashionable tailors at home. Good hats, such as those made by our leading hatters, are in demand, and American toys are sought after.

The climate of Guatemala is of an even temperature, the thermometer having an average range of from 68° to 74° F. in the daytime and from 62° to 68° F. at night; hence meats, fruits, vegetables, etc., having undergone the usual or ordinary cure in the United States, would stand the test of this climate well.

There is an especially good field for American machinery, such as sawmills, engines, boilers, pumps, and machinery for coffee and sugar *fincas* and mining and milling purposes.

There being no gas plant in this Republic, and the electric-light plant of this city supplying only the streets, leaves a fine opening for lighting material. But few of the stores make kerosene or candles a great factor in their business. California sends large quantities of kerosene, but a greater portion comes from Europe and retails at 75 cents per gallon in American gold, or about $1 per gallon in this money. Some candles are made, but hardly to the extent of preventing our merchants from entering the field, and I may say the same of soaps of all kinds. Household articles and kitchen utensils of all kinds command very high prices. An American bakery, furnishing hot, cold, and domestic bread, pies, biscuits, crackers, fancy cakes, etc., is almost a need, and to these might be added freshly made candies.

Recently an American butcher shop was opened, the only one in the city, and I am told it can not supply the demand. American butter and cheese are better than anything of the kind brought or made here, and there is not sufficient American-made butter at 87½ cents and $1 a pound to supply the demand.

Bonnets, hats, ribbons, and all classes of millinery and women's wear and dressmaking of the better class would do well, as complaint is made of very poor work of this kind.

Crockery, glassware; porcelain goods, from the lowest to the highest in price; art materials, chromos, engravings, prints, and especially picture-framing and gilding, are needed.

There are two or three American photographers who represent their fraternity and are apparently quite successful.

Germany and France control the carpet trade, but their stock and variety are meager, thus leaving an open field for more enterprising dealers or manufacturers. There are fine opportunities for mattress and pillow manufacturers and for our wooden and willow ware. Ready-made clothing can hardly be found here, and there is very little competition in ready-made fancy boots and shoes of good quality.

Dealers in, or manufacturers of, oil lamps and chandeliers of all classes and grades and silver and plated ware would find a good field.

But why attempt any further enumeration? I am every hour more clearly convinced that nearly every class of merchandise produced in the United States would meet with ready sale in these republics.

Following closely upon the action of the recent conference of the Pan-American Congress, held at Washington, it would be well if a deputation of experienced business men would visit these republics, especially the Republic of Guatemala, representing the business interests of our country—a commission of tradespeople who could almost at a glance seize upon the situation and ascertain the character, requirements, and classes of goods in demand. Our Government has labored unceasingly in the direction of reciprocal measures. It is a great and wise policy, this drawing into closer relationship pan-America. What grander public policy could be pursued than to stamp these American republics as friends, allies, and customers; and what stronger or firmer alliance could bind us than reciprocal business interests? Trade and commerce rule the world, and no period has passed, or can pass, but has strengthened and augmented their all-potential influence. Our nation is essentially a business people, whose power and wealth to-day emanate solely and entirely from labor and industry. The shutting down of a single mill, the silence of a single furnace, or the cobwebs on a single shuttle affect the community, however small, in which it is located; hence the wisdom of inaugurating any movement looking to the enlargement of our foreign trade.

FROM LIVINGSTON TO GUATEMALA CITY.

Probably no name is more obscure to the average American ear than that of Livingston, Guatemala; and yet among the seagoing vessels thronging the wharves of New Orleans there is to be found a steamer of the Macheca line leaving for this port each week, while from New York a steamer from the Williams & Rankine line sails once in 14 days.

The New Orleans route is generally chosen, being the shortest. From that port there is 2 days' sailing on the Gulf; the third day a smooth and delightful run of 2 hours between the island of Cozumel and the coast of Yucatan; then a 24 hours' tossing on the Caribbean Sea, when the pretty

little harbor of Belize is reached and the vessel drops her anchor for a day to discharge the European and American mail and cargo. After leaving Belize, a 12 hours' run down the coast brings the steamer into the harbor of Puerto Cortez, a seaport of Spanish Honduras, where connection may be made with the only railroad line in that Republic, going to San Pedro, a distance of 35 miles in the interior. From Puerto Cortez there is a 6 hours' run to Livingston, Guatemala, the most picturesque port on the Atlantic coast of Central America and the depot for all European and American mails bound for Guatemala city, the capital of the Republic.

On Wednesday of each week the New Orleans steamer arrives in Livingston, and on Thursday morning the small mail boat leaves on its 6 hours' trip up the Rio Dulce to Izabal, where the mail bags are transferred to mule back and begin their 6 days' journey to the capital. Travelers coming this way en route to Guatemala who are so fortunate as to have friends on the coast generally advise them of their coming, in order that they may procure from the interior the necessary mules and *mozos* for a quick and comfortable transit. But the unfortunate individual who comes unheralded and unknown must wait in Livingston or Izabal while a telegram is sent to Guatemala, Zacapa, or Gualan for the indispensable animals and Indians, possessing his soul in patience until they arrive. For some years the nearest telegraph office to the coast was at Izabal, 50 miles in the interior; but a line is now being constructed to connect this with Livingston, and in the course of a few months Livingston will be in cable communication with Belize and the world, thus facilitating in a great degree the commercial interests of the Republic of Guatemala.

The route from Livingston to Izabal is by water up the Rio Dulce and half across Lake Izabal, a distance of about 50 miles in all.

It is the same taken by Cortez on his first expedition to this country, and also by Mr. John Lloyd Stephens, that cultured and eminent American who came as special ambassador to this country in 1839, and who, in his interesting book of travels, has given, perhaps, the most graphic description of the country known to literature. But from the Guatemala of 1839 has grown up a much more civilized and progressive Republic, which truth is especially appreciated by the traveler going over this same ground described by Mr. Stephens. Only the picturesque beauties of the route remain unchanged.

The trip from Izabal to Guatemala can be made in 6 days. Starting from Izabal in the morning Juiriqua is reached in good time in the afternoon, affording a few hours' rest before night or an opportunity to the archæologist to examine the famous ruins situated at a short distance from the pueblo. The practical and prosaic-minded traveler will probably prefer the rest and an early start the following morning for Gualan, his second day's destination. Gualan is a town of considerable size and importance, where comparatively comfortable quarters and food are to be found.

The hotels and lodging places along this route from Livingston to the capital, offering, as they do, to weary, hungry travelers the unique diet of

tortillas and frijoles stewed in lard of uncertain age, constitute a subject of that peculiar nature of which the least said the better.

Leaving Gualan on the morning of the third day, Zacapa is reached in a half-day's ride, another half day bringing the traveler to Reforma for his third night's rest.

The sandy plains of Zacapa are, perhaps, the most unpleasant feature of this trip, and it is advisable to cross them either at night or early in the morning, thus avoiding the great heat and blinding reflection.

The traveler hastening to reach Guatemala will scarcely care to know that there is any road leading out from Zacapa except the one he rides along; but to him who is interested in the characteristic features of the country the road going to the south will offer a temptation to follow it. It leads to Chiquimula, and from there to Esquipulas, the Mecca of Central America, and is as much traveled as any road in the Republic.

In the well-built and imposing cathedral of Esquipulas stands the far-famed "Black Saint," in whose honor pilgrims come from Mexico and all parts of Central America.

From Esquipulas there is a direct road to Guatemala, but the route by Reforma is much the shorter. A day's ride from Reforma brings the traveler to Guastatoya, where he passes his fourth night. From there another day brings him to El Puerite, where the Motagua River is spanned by a bridge of native masonry, the best specimen of its kind in the Republic. Then the sixth and last day of the journey dawns, and the tired party move on to Guatemala, where they arrive before dark in their travel-stained garments, feeling very much out of keeping with the surrounding civilization.

This route to the capital is essentially the same as that along which the much-discussed Northern Railroad would have run had it ever been sufficiently well developed for such exercise, except that it would have started from Puerto Barrios, some 14 miles down the bay from Livingston, instead of Izabal. But this unfortunate line presents, in its varied history, a striking example of the uncertainty of human plans. Begun in the year 1884, under the administration of President Barrios, it flourished for some 12 months, being brought to an untimely end in the spring of 1885 by the fall of the President at the battle of Chalchuapa and the consequent unsettled condition of Guatemalan finances.

Again, in the year 1888, a new contract for its construction was arranged with the Government by an American gentleman representing London capital. But this also was doomed to die an early death through the bad condition of the national credit and the lack of confidence it inspired in London financial circles.

In the latter months of 1889 a fresh contract was made with a French gentleman representing a syndicate of his native country, and for awhile the tricolor sported on the Guatemalan breeze, while visions of the sundry millions promised as a loan by the conciliatory terms of the Frenchman's contract lent a delightful air of expectancy to the festal season.

To the glory of the Guatemalan Government be it said, they stand preëminent in their graceful acceptance of, and dignified contentment under, these trying conditions.

The rebellion in Salvador, to aid which domestic quarrel the Guatemalans, like good neighbors, marched, plunged the country in a state of deplorable uncertainty, and thus endeth the third chapter of the Northern Railroad.*

FROM THE UNITED STATES TO GUATEMALA CITY.

Of the different routes from the United States to Guatemala, by far the shortest is that by way of Livingston; but it is, however, much the most tedious and tiresome, and devoid of all comforts on the way from Livingston across the country to the city of Guatemala.

There is a weekly line of steamers from New Orleans to Livingston, making the trip in 6 days; but the journey would be much shorter were it not for a day's stop at Belize and another at Puerto Cortez.

Livingston is only a roadstead, and the steamer anchors about 2 miles from the coast, from whence the passengers are conveyed to the town in a steam launch and the freight by lighters.

Livingston is composed almost entirely of Carib Indians, and has about 3,000 inhabitants. The business, however, is in the hands of the whites, who, perhaps, do not number more than 30 or 40 people.

The traveler on his way to the city of Guatemala here takes one of the small steamers plying between this point and Izabal, on Lake Dulce. These steamers run three times a week and make the passage in about 5 or 6 hours, the distance being about 48 miles. The mouth of the Rio Dulce is almost at Livingston, and in passing through this tortuous stream one is struck by the beauty of the scenery, the precipitous and high banks being covered by evergreen foliage, from which depend many beautiful air plants and among whose branches sport birds of the most beautiful plumage. The river soon widens into the Golfeta, on whose shores are many banana plantations, and occasionally an Indian village is seen. Then a pleasant sail diagonally across one end of Lake Dulce brings the traveler to Izabal, where the custom-house is situated, Livingston being a free port. This is a small Indian town, but, owing to the presence of the custom-house, there are a number of better buildings for the accommodation of the customs officers and some few other civil officers. There is also a detachment of troops stationed here.

From here the traveler must telegraph to Gualan, Zacapa, or even to Guatemala for mules to continue his journey, and there is frequently considerable trouble to obtain them. From here to Guatemala the journey may be made in from 5 to 8 days, according to the quality of the animals and the burdens they have to carry. The first part of the journey, for about 9 leagues, to Palmya, a little Indian town, the road, or mule path, is over a series of

*"From Livingston to Guatemala City," thus far, would seem to have been written for the consul-general and incorporated in his report, for he now takes up the subject and goes partly over the ground already treated of.

mountains and is an almost continuous zigzag. The scenery, when the principal height of the first range is attained, is grand in the extreme, a range of mountains lying near and below Lake Dulce, with a range of cloud-capped mountains in the distance beyond. To Gualan, 9 leagues further, the path is much less mountainous, and at times opens out into space broad enough for a good wagon road. Gualan has about 2,000, or perhaps 3,000, inhabitants. The houses are of adobe, and the streets are well paved, and all these towns are fairly well lighted. There is a project on foot to make the Motagua River navigable for small steamboats from this point to its mouth, at Puerto Barrios; and there is now an American gentleman on his way to the United States to bring out dredges and other machinery to effect this much desired object. Then to Zacapa there will be a wagon road, which has already been begun. This will enable one to make the journey to Zacapa with comparative ease. From Gualan to Zacapa the country is dry and poor, and the plains of Zacapa are an arid waste. This is a place of about 6,000 inhabitants, and is the only respectable place on the entire journey. The streets are well paved, the houses of adobe and well whitewashed. From Zacapa the path often and for long distances opens out into what might easily be made a good wagon road until the bridge (*el puente*) is reached. This is a substantial stone structure, spanning quite a stream. From here the path becomes one of the worst that could be imagined and zigzags over the mountains through the rockiest and steepest places; but, when the summit is attained, the view of the ranges behind can not be surpassed for sublimity and beauty, and repays one for the arduous and laborious journey he has taken. Then to Guatemala the road is alternately hilly and comparatively level, and as the city is approached the road becomes broad and suitable for vehicles; but there is a tremendous hill to descend and a corresponding one to ascend just before reaching the city, but the road is good.

On the entire journey the only place where a bed can be secured is in Zacapa; at all other halting places one is furnished with a raw-hide cot, sometimes covered with matting, and the bedclothes he must furnish himself. For food he can get tortillas, frijoles, and coffee, and sometimes eggs and fat meat.

The cost of a mule for the journey varies from $14 to $20 (in this money), according to the scarcity of the animals and the bargain the traveler can make.

At times it may be difficult to secure a place to stop for the night, as the Indians generally do not care to render a white man a service. They are not courteous, as some travelers have represented them, and are only made so by fear or a desire to gain something. They never, however, molest anyone, and are quite honest, in this respect differing greatly from the Mexican Indians. The difference in the statements of travelers regarding their courtesy arises, probably, from their confounding them with the whites or mixed people, who are invariably polite and courteous.

THE LABOR QUESTION IN GUATEMALA.

The labor question in Guatemala has now become a very serious trouble, as the Indians will not work except under compulsion. Their wants are so few and they require so little to sustain life, which little nature so prolifically furnishes them in this climate, that they will work only enough to gain what they need to half clothe them and to supply the few things to eat that nature does not give them already prepared. Hence it is that some means must be devised to induce them to labor, as they, with few exceptions, have no ambition to rise above their present condition, although many temptations or rewards have been offered them to do so. They are honest, so far as their knowledge of honesty extends, that is, they will not actually steal; but they have no regard for their word in the making of a contract, and, if they see fit to stop work when only half through the time they contracted to work, they would not hesitate to do so and would not think they were committing any wrong. This is really one reason why their wages are so low, because, if they were raised, they would then shorten their days or hours of labor. For instance, an American gentleman, in order to get his work done, offered the Indians twice the amount of their regular wages; but the *alcalde* here interfered and told him that, instead of attaining his object, the Indians would work only 3 days in the week, instead of 6, as they would then earn all the money they would need for their present wants, which is all they care for.

The lack of labor, combined with some other causes, has made the general outlook for the coffee trade less bright this season than it was for the corresponding time last year. Prices abroad, although still good, have suffered during the late financial crisis. The rate of exchange has declined very materially and is variable. The export duty has been doubled. The actual crop of Brazil is heavier than it was last season, with every prospect of a still greater yield for the season of 1891–'92. Altogether, buyers are timid. Prices have not yet been established in the department of Alta Vera Paz, and the yield per tree this season will fall far short of that of last year, although the total quantity for shipment will probably be made up by new *fincas* which are now bearing their first crop.

Six years ago the planter of Alta Vera Paz was provided with labor by the local authorities, payment being made in advance. But little attention was then paid to the *colono*, or tenant, system, as the demand did not exceed the supply. As new places, however, were rapidly coming into existence, the intelligent planter saw trouble ahead, and commenced buying in large tracts of settled land and leaving the Indian in possession, but demanding his services as laborer and paying the same wages as those received by men obtained through the *cabildo*. As a rule, the *fincaro* who is without *colonos* is in a very bad way. While coffee-planting has been on the increase, the supply of labor, on the contrary, has decreased, as the Indians, finding that more labor was demanded of them, emigrated to distant and inaccessible parts of the country or crossed the frontier into Mexico and British Hon-

duras. The future outlook in this department is, then, far from reassuring, and it is said that north of Coban many of the planters will not be able to pick more than 50 per cent. of their crop. On the Pacific slope this state of affairs, as yet, is not quite so desperate, as there is a much larger Indian population to draw from and land is too valuable for the *colono* system to be practiced.

The Alta Vera Paz coffee is of fine quality, for which the highest market prices are obtained, and is considered outside of market fluctuations. It is sold as a mixing or flavoring coffee, and held its price at or near 100*s*., when several years ago other grades were selling at 50*s*. But the best results can not be hoped for in this department, where this superior kind of coffee is grown, until something is done to provide an adequate amount of labor; and while there is still plenty of it right in the vicinity of the places where it is needed, notwithstanding the number of laborers that have emigrated to avoid being compelled to work, it is believed that the growing of coffee must be retarded unless foreign labor be introduced. Now, the Indians object to this, and do not, and will not, willingly coalesce with a foreign element, although they do not openly oppose it. They are suspicious of foreigners and do not care to accommodate them in any way, and at times travelers have been compelled to apply to the authorities to compel the natives to give them lodging over night, although they are always paid well for such service or accommodation, which, of course, is meager in the extreme.

Now, the introduction of foreign labor while this state of affairs exists might result disastrously, although the natives are inoffensive, yet, if roused, might make trouble; hence the introduction of this labor is a question that must not be inaugurated without very careful consideration. Some might ridicule the idea of these humble people (and timid, too, as they call them) ever rising to protest against anything; but a volcano may remain quiet for hundreds of years and then finally break out and destroy cities. Much the best way would be to try to induce these people to supply the labor themselves, if such a thing were possible, but that, it is feared, would require a long course of training, if it could be accomplished at all, so averse are they to do more work than is required for their absolute wants. As an instance, not long since a gentleman wanted parts of machinery taken to his mines, which were of such a nature that they could not be carried on mules, so he endeavored to get the Indians to carry them for him; but, as it would require more days of continuous labor than they cared to give, he could not secure any. He then applied to the *jéfe politico*, and this officer made requisition on a village near by for the requisite number, and then they were compelled to go; but, when they reported to the gentleman requiring them for duty, one said he was sick, one lame, another had a sore arm, and the rest had various complaints. He understood the matter and told them that, unless they immediately went to work, he would report them and have them punished. Finding they had no alternative, they marched off with the articles, and there was then no further trouble. When compelled to work, they can

do it; but to get them at it and to keep them at it regularly is the trouble. This is a question that the coffee-planter must seriously consider before embarking in that enterprise.

MINING IN GUATEMALA.

[Mr. Rea to Consul-General Kimberly.*]

Responsive to your desire, I give my observations and examinations of the mineral resources of that part of the Republic to which they have been limited for the past 12 months, together with what information on this subject I have been able to obtain from reliable sources.

My tour of inspection extended through a belt of country from the coast range of mountains on the northwestern frontier of the Pacific side, near Tacaná, across the Sierra Madres, to the coast range of the Atlantic or Gulf slope. The entire stretch at intervals is essentially a mineral territory, in which is found the presence of precious and base metals, and upon which little or no prospecting or exploiting has ever been made.

In the mountains of Motozintla, of the Pacific coast range, there are immense deposits of low-grade gold and silver sulphuret ores and some very high-grade lead ores carrying a low percentage of silver; also, some good copper carbonates.

Near Tejutla exist extensive beds of excellent ocher ores. In the department of San Marcas cinnabar of good grade has been discovered in the blue serpentine formation. The mine has been denounced, but no development has been done on it to test its merit. The formation, being the blue serpentine, is highly favorable for the existence there of permanent deposits of this valuable mineral.

Auriferous high-grade copper ores are found on the south slope of the Chuchumatanes range of mountains, in the department of Huehuetenango. The excellent character of the ore, being high-grade, clean carbonates on the surface, lying in a contact formation between limestone and syenite, would safely justify exploration.

At Chiantla, near Huehuetenango, on the southern flank of this same mountain range, there are a number of lead mines, carrying more or less silver, which have been worked on and near the surface for the past century in a primitive and desultory manner by the Indians, mainly for the lead they contain. They lie in strong veins and deposits, between talc slate and syenite on one side and ferruginous limestone on the other. The ores are of the simplest carbonate combination, carrying all the necessary smelting fluxes, and yield a clean lead product in the old adobe air furnace under fuel heat alone, and average from 40 to 60 per cent. lead and from $10 to $15, and as high as $40, in silver per ton. The geological formations in which they are found afford reasonable assurance that, as depth is attained in these mines, the ledge or percentage of silver will increase.

About 16 leagues north of Huehuetenango, on the high table-lands of the Chuchumatanes mountain range, at Todos Santos, the same mineral formations we find at Chiantla again break out, the veins, or deposits, being somewhat bolder in their surface croppings, averaging from 60 to 70 per cent. lead and from $25 to $45 in silver. A group of these mines is owned by Mr. Franciscobaleg Mont, who has made some shallow explorations on them, developing large bodies of argentiferous lead ores, which already improve in silver at the slight depth he has run down on them.

Strong natural fountains of saline waters burst out at San Mateo, Ixtatan, and Pichiquil. They are being operated on a rude, primitive scale, and produce an excellent grade of salt, which finds a home market at remunerative prices in the immediate population.

The same argentiferous lead belt follows the line of contact between the limestone and syenite and talc formations in an easterly direction, and forms another group of mines of the same character at Santa Cruz de Mushtli, on the south fork of the Passion River, in the municipality of Salama. My attention was called to a vast deposit of this class of ore located in

* Mr. Rea, a native of North Carolina resident in this Republic, has given the subject of which he treats careful attention and investigation.

a sharp peak on the east bluff of the river, which had every appearance of being the ragged remains of an extinct volcano that in its last eruptions had vomited up a flow of molten lead, mixed with a small percentage of carbonates of lime, and in the course of the flow had congealed into large bowlders of pure lead metal. A marked depression, or basin, on the top of the peak represented the outlines of a crater. Here bowlders of the metal lay in heavy masses, as though they had been heaved in a liquid state, granulated into masses, and cooled just as the action ceased. From the slight exploration made at this point it seemed to develop a large chimney of ore that might reach down to a great depth—to the fountain head or initial beds of metal that produced this phenomenal flow on the mountain side. The test assays ran from $10 to $60 in silver and 80 per cent. in lead. This same mineral formation extends on further east along the Chuchumatanes range, and is lost in the unknown wilds of the Lacandon country. To say the least of this silver-lead belt, it is a wonderful showing of mineral on the surface, and the attendant geological features are most favorable for large and permanent bodies of ores and an improvement in the percentage of silver in the downward tendency of the veins or deposits.

Further west, in the lower Pacific slopes, there occur heavy beds of fine, loose gravel, bearing 2 and 3 ounce nuggets of pure lead. These nuggets seem to be plentifully diffused throughout these beds and, as far as I could ascertain, were extensive. The rare occurrence of pure lead in this natural state may be accounted for on the theory that the fiery action of some neighboring volcanoes had encountered a lead vein in its eruptive course and had reduced and refined its ores by its underground fires, and in its inward throes had cast up the molten metal, which, on reaching the cool air, granulated into these small virgin nuggets, and had settled countless ages ago in the sedimentary beds where we now find them. Lying, as they do, near a coast port, they might be exploited to an advantage.

Cinnabar ore is reported to have been found in the municipality of San Marcos, and also tin ores near Malactan.

Some excellent salt springs break on the Salama River. The waters yield a high percentage of first-class salt, and, if systematically operated, could be made to yield a handsome revenue.

Two large deposits of black lead, or plumbago, exist, one about 15 miles north of Huehuetenango and the other about the same distance south. The mineral is of an excellent variety, clear of grit, and ready for commerce.

In the department of Quiche tradition places a gold mine of fabulous richness somewhere in the mountains of Illon, which was discovered and worked in the colonial days of the Jesuit priests. The old canonical archives speak in unmistakable terms of its existence and the wonderful richness of the gold output realized by the church and the royal crown from 1627 down to the close of the century, when, from political convulsions and hostility of the Indians, the operations were abandoned; and it has since been so far neglected that it is now known only in tradition. The natives of that locality possess the secret of the location of the mine, but are a very exclusive people and threaten with death anyone of their race who would dare reveal the secret. On one occasion President Barrios succeeded in obtaining a specimen from the mine from one of the tribe, which proved of such extreme richness, and the story relative to the mine so direct, that he was so thoroughly convinced of the reality of the tradition that he used every effort to unearth the secret, and finally induced the same Indian to lead one of his trusty agents to the mine, but, before reaching the place, their tracks were dogged by these jealous Indians and the guide murdered; and thus the prospective golden treasure remains an unsolved problem for some ambitious prospector to work out in the future. Marble of a superior quality, alabaster, and immense beds of gypsum are also found in this department.

The department of Baja Vera Paz has claimed my attention for the past 3 months, and I find the geological formation of that portion to which I devoted my examination highly favorable to the existence of the precious and useful metals. I found well-defined auriferous gravel beds at different points along the banks of the Rio Grande, showing a fair average prospect of heavy, coarse gold. The little development I found here had been confined to the immediate banks cut down by the river channel, by scooping out the gold-bearing gravel from the upper

surface and patiently washing it in rude wooden *bateas*, or bowls. Seventy-five of these *bateas* averaged about $5 in nice, clean gold. It does not seem that there has been any attempt to properly explore any of these auriferous gravel beds. In many places the flats extend back from the river banks to a considerable distance towards the hills or bluffs, giving an extensive area for placer ground. The gold-bearing gravel beds generally lie deeply capped by alluvial deposits, and consequently drifting in on the beds would be the most feasible way of mining them; and, as the gravel is clear of clay, some simple gold-washing device would easily eliminate the sands and other matter from the gold at a trifling outlay of labor. A little energy and enterprise expended in prospecting these grounds might be well repaid. The river at its lowest stage would afford all the hydraulic power that would ever be required in extensive placer operations.

Good croppings of sulphurets of silver and carbonates of copper are found in the adjacent foothills above the Panahigh placers.

Along the south slopes of the range of mountains that run parallel to the Rio Grande there extends a mica belt for a considerable distance. The line of this rare mineral is very distinctly marked, strikingly similar to that of our best mica formations in North Carolina, the chief source of supply of this mineral in the United States. The ever-present serpentine and foliated rock structure, the light-colored gneiss, and the micaceous schists, with frequent and indefinite alternation of the talcose slates, clearly define the line of this mineral, upon which at intervals good, strong croppings of mica break out, and where, exposed by gulch erosions, show veins or deposits from 6 to 10 feet in width, studded thickly with large bunches or blocks of mica firmly fixed in the gangue rock of the ledge, giving every evidence of permanency.

These blocks are of the finest laminated structure, clear as crystal, and entirely free from foreign substance that so often detracts from the value of this mineral. These blocks of mica would probably yield 15 per cent. in cut commercial mica sheets, averaging from 2 by 4 to 6 by 12 inches in size. The refuse of the blocks and the smaller sheets would furnish a large quantity of clean mica that could be profitably utilized by grinding up into flour mica for export, as the uses of ground mica are yearly increasing. I will not fail to note that frequently the sheets in some of the blocks exhibited beautiful figures of variegated colorings, shaded with blue, green, red, and yellow, happily blended in the most delicate tints, which, on a thorough fire test, proved to be a fast-coloring matter. This class of mica, when colors become more solid, commands fancy prices.

As there has been no development on any of these deposits or veins beyond the prizing or tearing out a few blocks from the ledges by the natives, who split out the largest sheets, which they use in decorating their patron saints and adorning their church altars, it was difficult to form a definite idea of the walling or inclosing rock of the veins or their depth, dip, or strike; but, from the best examination that could be made under the circumstances, the mineral area seemed to be inclosed on one side by mica schists and on the other by porphyritic gneiss, the gangue rock or fissure filling being mostly of coarse granite, and, in some places, mixed with coarse quartzite, in which the forces of crystallization had met with comparatively little resistance.

In the process of formation the crystals had developed to the large size we find them here on the mere surface, and had been the result of aqueous, rather than igneous, origin. In this connection, I would say that, from careful and long-continued observation on the subject of mica vein formation in the country, the vein structural formation which we find here has a most favorable influence on the width, depth, and permanency of mica veins, or deposits, and doubtless below the zone of atmospheric influences, which usually is from 10 to 20 feet, the veins will become more solid and the quality of the mica will correspondingly improve. A company has been recently organized, and has preëmpted or denounced the main deposits of the Chol group, and are preparing for a systematic development. From the great quantity of mica in sight they will doubtless soon have a product ready for market.

Running parallel with the line of the mica area there are found veins of asbestos and deposits of plumbago. The asbestos is of the fine textile variety, and seems free from all foreign

substances, varying in color from deep gray to snow whiteness, the fiber measuring from 1 to 3 feet in length. The plumbago lies in irregular deposits, showing considerable quantities on the surface, and is of a clean quality.

In the vicinity of Ravinal and Cabulco are found undeveloped silver and copper ledges. The silver veins are small on the surface, but in good primary formation, being fair-grade lead sulphurets. The copper veins are small, but the ore is of the finest kind of malachites. Loadstone and immense deposits of high-grade magnetic iron ores, also large gypsum deposits, lie in the same locality.

In Alta Vera Paz, near San Cristobal, there is a group of lead mines carrying a light percentage of silver, which, though small, would pay for separation on a large scale. These mines are worked for the lead alone, and supply the entire ordnance department of the Government. Thus this silver-lead bullion is destined to be improvidently manufactured into bullets to be expended in bloody human conflicts, instead of being refined and coined up to win the battles of peaceful human industry.

Near Coban are extensive chalk beds of a most excellent quality, which are mined, and the product prepared into neat crayons that supply all the schools and colleges of the Republic with this useful article.

Native mercury has been discovered in the mountains north of Coban. Specimens of float rock taken from the same locality proved to be the gray sulphurets of mercury. No explorations have yet been made to discover the ledge. Quantities of bitumen are found in beds in the eastern section of the department, which is strongly charged with petroleum, is highly inflammable, throwing off a bright, strong flame, emitting a decided coal-oil flavor. A proper exploitation on these beds by systematic boring would doubtless tap, at a moderate depth, a petroleum flow.

Several large, bold flows of salt springs burst out at the seven sierras, in the northern part of the department, which have been been operated for years and yield an extra quality of salt, from which the population of the eastern departments mainly draw their supplies, and, if worked to their full capacity, could be easily made to supply all Central America with their product alone.

In the department of Izabal, on the alluvial lands of the Motagua and Polochic, in the vicinity of Libertad and Quebradas, exist extensive beds of gold placers, which have been worked for years in a primitive way, until several foreign companies have commenced operating them with the best modern appliances, and they are reaping favorable results. These gravel beds cover a large area of ground, are of good average thickness and well defined, and under proper management should yield fair dividends.

These two rivers and their tributaries drain an extensive mountain country, and have in time cut and dragged down their golden sands from existing quartz veins on their course, which circumstance would give reasonable grounds to believe a quartz El Dorado of the "yellow wealth" may some near day be uncovered somewhere along the upper line of their flow.

In the foothills a few leagues west of Livingston have been discovered several coal veins, which are said to be of good anthracite variety; but no development has yet been done on them.

The department of Chiquimula abounds in numerous meritorious mineral prospects. As far as discovered, the principal localities are the districts of Concepcion, Alotepeque, and Lemones. The natives of these places have, in a crude, desultory way, taken out considerable quantities of silver, copper, iron, and antimony.

The ancient mineral of Alotepeque lies in a mountain of the same name, and was at one time operated very successfully, producing large quantities of silver, when a disastrous cave occurred in the mine, burying the underground works so effectually that the owners, having amassed comfortable fortunes, never attempted to reopen the works; and the mine has ever since remained abandoned, save what little work the Gambusinos have done in their loose mining style, culling out and robbing the ores from most accessible points of the old works for years afterward, then extracting considerable quantities of silver from the mine.

There exist in the ancient archives reliable data of a rich silver mine near the pueblo of Guanagazapa, in the department of Escuintla, that was successfully operated in the colonial days, but all traces of it have been lost. In another place, known as the "Salts," there has been recently discovered a silver mine that gives satisfactory average assays in silver, but for want of enterprise and means has never yet been explored. There were also several gold and silver mines worked at the same date, and, as the canonical archives indicate, yielded profitable returns. Its identity has been entirely lost, and there has never been enterprise enough among her easy-going agricultural population to explore for their rediscovery.

At Metascuintla, in the department of Santa Rosa, is located the Rosario silver mine, the only quartz-silver mining enterprise in active operation in the Republic. The property is owned by Messrs. Catarrus & Co. and has been recently placed under the management of Mr. G. F. Thomson, a highly competent American metallurgist and engineer, who is giving the most satisfactory results to the stockholders. The mine is equipped with a good ten-stamp mill with all the modern ore-treatment and mining appliances of a well-appointed silver plant, and yields an output of from $30,000 to $35,000 worth of high-grade silver bullion per month. The ores are dry sulphides, sulphurets, and chlorides, with a frequent combination of zinc blende, that insidious "thief of metals" that so often gets away with the precious metals unless closely watched by the skillful operator; but, under the present process and superior skill of the present administration, the ores are worked up to a high percentage of their value, giving, probably, a net profit of over 100 per cent. on the capital invested. For the past 2 years the treatment of the ores has been quite defective. Their refractory nature has baffled the efforts of the metallurgist and has inflicted heavy losses on the owners, who, nothing daunted by these temporary failures to manipulate the ores, and regardless of cost, prudently procured from the United States the services of the present highly accomplished and competent manager, who soon set matters right and has, under his short regime, practically demonstrated the great value of this mining property. The veins are strong, well defined in the primitive formation, and, from the splendid reserves of high-grade ores now systematically opened up and in sight in the underground works, assure the lucky owners a "bonanza" for years to come.

In the different mineral belts of the Republic, without doubt, there are other such opportunities as the above lying around loose awaiting only intelligent and practical methods to be put in operation.

On reference to the old archives of the colonial days, we find that, between the dates of 1627 and 1820, 1,322 mines of gold, silver, lead, copper, iron, tin, and one of mercury were opened and worked, and were a source of great revenue to both the church and State. Taking these important data into consideration and the presence of these minerals as now known and recognized to exist over a considerable extent of her territory by subsequent and recent observation and exploration, the question naturally arises, why are these valuable resources neglected? In answer to this question, let us take a brief glance at the political and industrial situation from the first date to the present. The mining industry between these dates was entirely under the auspices of the religious orders. No encouragement was given to home investment, and the enterprise of mining was circumscribed. The skill and processes of that day were a patent sacredly held by a few chosen ones of the order, and, when they were expelled from the country at the beginning of this century, the mines were abandoned, and all spirit of mining enterprises disappeared. In the decades of civil revolution that followed all the financial resources of the country favored only the agricultural and pastoral industries, in order merely to keep soul and body together. Thus reduced to this sad condition, her people could take no risks in mining explorations, and, as capital is decidedly averse to bullets and blood, no foreign investors would venture to take any chances under the existent unsettled condition of things in that unhappy era. The mines being generally remote from the centers of population, even all vestiges of their locality were lost. Thus the country struggled on until J. Rufino Barrios took control of the Government and began to foment a spirit of progress. Until recently Guatemala was, to all intents and purposes, an

insular country, reached only by the sea. The business centers, being all in the interior, were accessible only by difficult bridle-path roads. Its modes of business were those of a country apart from the rest of the world. The interior valleys and table-lands, possessing a rich soil and a superior climate, are capable of every variety of the most valuable productions of the globe.

Under these conditions, emerging from her lethargy and exclusiveness, the agricultural interest first naturally claimed the attention of her people; and what foreign enterprise, capital, and outside commercial pursuits that found their way into the country were, too, employed in developing this more conservative interest. Her people lived mainly to themselves and cared but little for the outside world, and the outside world cared but little for them. But the progressive spirit of President Barrios began to infuse broader ideas of intercourse and commerce among her people, and then she began to assert a continental position politically and geographically and to realize the favorable location she occupied betweeen the two great oceans. Her plucky and enterprising ruler caused good roads to be built to every town and hamlet within her borders. He prospected and built two lines of railroad from the Pacific side to the interior, and at the time of his death was engaged in the groundwork of extending one of the lines to connect with the Atlantic port of Santo Tomas. Thus he left Guatemala to some extent enabled to hold out her hands and invite trade and commerce with the outside world.

Fortunately the same spirit has been taken up and fostered by his worthy successor, President M. L. Barillas, whose ambition seems to be alone for progress and prosperity for his people, especial good will and amity to foreigners. His wise and provident course has stimulated business at home and given faith and credit abroad, and under these advantageous conditions capital can afford to enter and test the merits of the mining interests. Relying on the first recent favorable test that has already been made, and taking into consideration the reliable mining traditions of the past and the known presence of the precious and useful metals spread over such an extensive area of her territory, favorable results may well be expected, and a new field for legitimate mining will here open up in the near future that will tempt and attract the practical miner from abroad. The enlightened policy of the Government offers every reasonable encouragement to, and throws every solid guaranty around, this particular interest. There need be no misgivings on the part of the foreign miner as to the security and full enjoyment of his rights under the liberal laws enacted to protect the mining industry.

The mining operations, the character and availability of labor, the costs of freight, and all the other items that bear directly upon the value of mining properties must be closely studied and considered. The mining and reduction of ores in Guatemala, as in all new interior regions, are accompanied by conditions and difficulties that at first are rarely appreciated by foreign operators. When they are properly understood, those difficulties can be satisfactorily overcome. They must learn the character of the native labor and the defective transportation service incident to all mountainous countries, how to convert the crude material and rude appliances at hand to the immediate wants of the situation, and also the importance of keeping a good mining stock ahead on hand.

The American especially must learn to curb his lightning business modes that he is accustomed to at home, and not to be too forward in attempting to force new ways from the start, and, above all things, to leave off his practical motto that "time is money" and be ever ready to make a reasonable compromise on every *manana* proposition that annoyingly may meet him at every turn, and he will soon be able to overcome the trouble and difficulties that beset all new enterprises in a new country.

THE GUATEMALA CENTRAL RAILROAD.

In order to show more fully the business situation in this Republic, I will be compelled to go into some detail, and will take first the Guatemala Central Railroad, an enterprise owned and controlled entirely by citizens of the

United States at an outlay of about $4,000,000, and which is to-day the finest property in Central America.

This first and most important American enterprise successfully carried out on the Central American isthmus by capital, energy, and perseverance of United States citizens owes its existence principally to the initiative of that true friend of Americans and American institutions, Gen. J. Rufino Barrios, who, it is true, ruled this young nation with an iron hand, but left this great work of real progress and undeniable credit to its projectors and constructors as a monument and legacy to the future generations of his native country.

The Guatemala Central Railroad was born and nursed in its infancy under the strong autocratic will of this remarkable man, who gave it the whole benefit of his personal care, ambition, and protection, which large enterprises of the kind demand in these new and unsettled countries.

The history of this American enterprise, as is attested by the many documents and protests filed in the United States legation ever since General Barrios's protecting hand was withdrawn and missed through his untimely death in 1885, shows only too plainly the value and the necessity of decided protection for foreign investments and enterprises in these countries, where an inexplicable shortsightedness, prejudice, and moral delinquencies are so apt to do harm to all foreign institutions. That the Guatemala Central Railroad has been able not only to hold its own against all drawbacks of this kind, but has triumphantly overcome all difficulties and has developed into a successful financial enterprise of great credit to the country, is solely attributable to the invariable prudence, patience, firmness, and, at times, considerable diplomacy shown by the board of directors of the company and their trustworthy agents and managers of the property here in defending and sustaining their acquired vested rights and franchises, unaided and alone, when even the immediate good offices of the home Government were not available under existing regulations of international contract interpretations.

Notwithstanding these difficulties, this road, controlled by some of our best-known American railway operators and financiers, like Messrs. C. P. Huntington, Charles F. Crocker, Morton, Bliss & Co., and Senator Leland Stanford, has developed its important property to a highly creditable standard, in its physical conditions as well as in its financial standing.

A very liberal policy has been strictly observed by the company towards all native interests, and no capital has been spared by men who know what they are doing to give Guatemala first-class railroad facilities in every respect, even to the point of spending considerable fresh capital on an entirely new reconstruction of 14 miles of the most difficult part of the road, where it overcomes in 16 miles a rise of 2,600 feet. This new work caused a removal of nearly 1,000,000 cubic yards of matter, mostly solid rock and bowlders, and the construction of 9,000 cubic yards of first-class rubble masonry, the foundations being laid in cement mortar. Very substantial,

solid iron bridges and large arched culverts, some over 200 feet long and from 12 to 15 foot openings, have been substituted for the former wooden trestles, and the whole line is in every respect in the very best condition.

The rolling stock and motive power are, of course, all of American manufacture, with the exception of about thirty freight cars built here in the company's shops of the very best material with American trucks and fixtures. Every car on the line is equipped with the Westinghouse automatic brake gear. Two splendid, powerful Baldwin locomotives, 17 by 22 inch cylinder and 3,000-gallon tanks, weighing 63 tons in working order, have just been added to the company's motive power. A still further increase of locomotives and rolling stock is contemplated on account of the rapidly expanding traffic, particularly in import and local trade along the line. The net income of this road has been more than doubled within the last 4 years, and the standing of this American company is reflecting great credit upon the American flag, because this railway is recognized by all foreigners as the best-equipped road between the United States-Mexican line and Chili.

This subject being a very interesting one to many Americans, I can hardly do better than give some statistics regarding the improvement of this road, its changes, and its remarkable financial progress, showing what can be accomplished by competent and persevering men.

Table showing the freight traffic of the Guatemala Central Railroad during 1889 and 1890.

Month.	Import.		Export.		Local.	
	Quantity.	Rate.	Quantity.	Rate.	Quantity.	Rate.
1889.	*Tons.*		*Tons.*		*Tons.*	
January	1,222	$21.38	1,269	$6.30	1,246	$5.00
February	958	22.64	1,672	7.56	1,351	4.75
March	1,089	20.00	1,701	7.92	1,501	4.81
April	867	20.78	1,038	8.01	1,262	5.20
May	1,267	19.56	742	6.57	1,336	4.90
June	820	21.87	233	6.94	973	5.12
July	865	22.30	187	6.37	880	5.51
August	1,219	20.88	74	11.84	964	5.10
September	1,223	19.85	95	10.86	929	4.97
October	1,106	20.98	128	6.75	973	4.81
November	1,215	21.47	175	7.19	1,089	4.92
December	1,258	22.37	674	6.49	1,469	4.63
Total	13,109	.....	7,988	.....	13,973	.....
1890.						
January	1,365	22.47	1,500	7.73	1,398	4.65
February	1,108	21.12	1,785	8.59	1,461	4.90
March	1,602	20.35	1,735	7.56	1,599	4.75
April	1,274	23.11	1,092	7.96	1,265	4.98
May	1,305	19.78	833	7.47	1,262	5.08
June	1,329	21.26	431	6.62	1,527	5.13
July	1,242	20.24	172	7.00	1,245	5.08
August	1,682	18.19	162	9.19	1,534	4.34
September	1,773	16.55	126	11.72	1,295	4.51
October	1,338	17.10	101	24.32	1,439	4.83
November	1,664	20.29	247	7.98	1,431	4.85
December	1,875	20.79	627	6.72	1,639	4.28
Total	17,557	.....	8,811	.....	16,895	.....

SUMMARY.

Description.	1889.	1890.	Increase.
	Tons.	*Tons.*	*Tons.*
Import	13,109	17,557	4,468
Export	7,988	8,811	823
Local	13,973	16,895	2,922
Total	35,070	43,263	8,193

Table showing the earnings and expenses of the Guatemala Central Railroad since the opening of the line.

Year.	Gross earnings.	Expenses.	Net earnings.	Percentage of expenses to gross earnings.	Percentage of net earnings to gross earnings.	Subsidy.
				Per cent.	*Per cent.*	
1885	$373,058.90	$261,141.44	$111,917.46	70	30	.....
1886	403,077.94	230,043.76	173,034.18	57	43	.....
1887	423,873.63	212,267.84	211,605.79	50	50	$16,666.67
1888	491,001.99	254,772.41	236,229.58	52	48	50,000.00
1889	538,641.36	276,986.23	261,655.13	48.6	51.4	50,000.00
1890	658,042.21	302,680.43	355,361.78	46	54	50,000.00

Table showing the passenger traffic of the Guatemala Central Railroad during the year 1890.

Month.	1889.	1890.
January	$10,849.53	$14,315.28
February	10,995.18	11,477.50
March	13,976.09	14,935.69
April	12,574.33	13,298,41
May	12,800.10	15,465.47
June	9,180.98	10,910.15
July	9,060.25	10,880.22
August	10,011.22	10,033.79
September	8,543.17	11,874.79
October	8,636.94	11,183.16
November	10,790.63	13,264.43
December	12,591.74	15,405.29
Total	130,010.16	153,044.18

The increase in 1890 over 1889 was $23,034.02, or 17¾ per cent. The average fare per passenger was $1.15.

In accordance with the settlement of August 27, 1887, agreed upon between the Government of Guatemala and the company, the latter engaged to change the seven wooden trestles on the Escuintla-Palin section for iron structures within the term of 20 months from that date.

Engineers were placed at once in the field by the superintendent, in order to study the immediate and most feasible execution of the company's engagements in regard to the change of iron bridges for the wooden trestles.

The result of these studies showed clearly: (1) That the masonry under the wooden supports was highly defective and had to be renewed entirely of a much stronger quality; (2) that the wooden trestles could not even serve

as false works for the execution of the iron structures; and (3) that on the same locality the latter could not be put in without a long and tedious suspension of traffic.

Consequently the location of new bridge points had to be made entirely independent under a very considerable expense in the deep-cut approaches, wherever these new bridge points might be located. This difficulty, together with the extremely heavy grades of the old line (5 to 6 per cent.), convinced the superintendent that the most economical and reasonable thing to be done under the circumstances was to look at once for an entirely new line which might partly avoid the above difficulties and reduce the general heavy grade to the maximum of other sections of the whole line (say 3½ per cent.), with compensated curvature.

Of course, months of valuable time had been consumed already by these studies, but, as the inconsistent action of the constituent assembly of October, 1887, had given ample margin for protest against congressional action, which actually threw the time as an essence of contract out altogether, they had the opportunity to propose to the Government a complete change of the line, which was accepted and finally approved by the assembly of 1888, providing in the same decree that the 20 months for the change should commence from the publication of said decree, April 23, 1888.

The construction time was exceedingly short. However, no alternative was left but to accept it after the ill-will shown throughout the sessions of the constituent assembly of October, 1887, and of the regular legislative assembly of March and April, 1888, had proved only too clearly that a pretext for canceling the settlement of August 27, 1887, was looked for, when this settlement had really no business whatever in Congress any more.

A rather hasty preliminary survey had been made to ascertain the feasibility of a lighter grade, which was verified with an approximate movement of some 600,000 cubic yards of grading and 5,000 cubic yards of masonry. This preliminary survey was made by Col. Charles Buckley as chief of party, but no attention was paid to the five road crossings over the old line in relation to temporary stoppage of traffic, which was afterwards positively denied by the Government after having allowed a reasonable suspension of traffic before. Such denial obliged them to an essential change of location in many parts, with a considerable increase in quantities of movement of ground.

The superintendent certainly has to take a great deal of blame upon his shoulders for not securing binding documents from Minister Barrutia as to temporary suspension. When it was time and when he applied for the same, it was too late to mend matters, leaving them with a difficult engineering problem on their hands, when the crossing and recrossing of the old line could not be avoided in order to obtain a lighter grade, and when these five crossings conditioned to be either at grade or above or below it. The problem was solved very creditably by engineers A. J. Scherzer and W. Moore locating four grade, and one overhead, crossing.

Actual work was commenced on June 1, 1888, and grading finished on December 2, 1889, showing a movement of ground of 837,331 cubic yards,

106 cubic yards of riprap, 9,059.6 cubic yards of first-class pointed rubble masonry.

Not a schedule train of the time card was suspended during the whole construction time. All necessary material was on hand in good opportunity and at the right moment, with exception of the iron-deck truss bridges ordered from Europe. These were delayed for 4 months on account of strikes in England, and this delay was taken in December, 1889, by Minister of Public Works Salvador Escobar as a fresh protest to threaten forfeiture of the franchises.

The time expired really on December 23, 1889, and the line was ready on March 30, 1890, or, say, 3 months behind contract time on account of the delay in the arrival of the iron structures, which was beyond the control of the company. The necessary protests and notifications on this head were made to the Government, claiming exception on *force majeure* and acts of God.

After losing the whole month of April, 1890, without definite action, the Government finally ordered the appointment of an inspecting committee of Government engineers, and upon their favorable report decreed the opening of the line for public service in the latter part of May. This was verified on June 1, 1890, and the service since that day has been carried on strictly to schedule, without missing a single train.

The new construction account is not closed yet, as they still are taking out the old track and bridges, of which the heavy steel is being changed down to lower line, an expenditure which properly belongs to new construction.

EXPORTS AND IMPORTS OF GUATEMALA.

Table showing the exports for 1889.

Articles.	Quantity.	Value.
Sugar.....pounds...	1,002,426	$50,121.30
Indigo.....do.....	4,775	4,775.00
Oil from trees.....do.....	950	95.00
Dissected animals.....do.....	433	1,000.00
Coffee.....do.....	55,238,905	12,704,948.15
Cocoa.....do.....	2,112	2,112.00
Hides of cattle.....do.....	1,480,684	207,295.76
Hides of deer.....do.....	21,971	8,788.40
Horsehair.....do.....	660	660.00
Images.....do.....	1,523	5,000.00
Rubber.....do.....	169,724	84,862.00
Bones.....do.....	16,838	168.38
Woolen clothing.....do.....	8,714	13,071.00
Soles.....do.....	10,218	3,065.40
Sarsaparilla.....do.....	19,696	5,908.80
Aguardiente.....gallons...	1,943,360	29,150.40
Bananas.....bunches...	110,222	44,088.80
Plants.....number...	128	500.00
Gold coin.....	.....	1,555.00
Silver coin.....	.....	16,678.50
Total.....	.....	13,247,689.80
Total in 1885.....	.....	6,069,645.82
Total in 1886.....	.....	6,179,502.91
Total in 1887.....	.....	9,039,391.26
Total in 1888.....	.....	7,239,977.38

Table showing the imports for 1889.

Ports.	Quantity.		Value.	Duties.
	Packages.	*Pounds.*		
Northern	58,092	7,364,956	$238,793.84	$177,906.44
Southern	401,204	43,290,832	6,840,579.75	2,522,212.57
Total	459,296	50,655,788	7,079,373.59	2,700,119.01

Table showing the imports by countries in 1889.

Country.	Packages.	Value.
England	84,122	$1,598,762.45
United States of America	220,446	1,332,398.56
South America	1,826	1,207,624.32
France	57,691	929,580.93
Germany	64,735	715,239.65
Central America	5,529	691,857.30
China	607	121,285.20
Spain	7,328	112,459.05
Belgium	7,496	98,732.80
Switzerland	843	85,631.85
Belize	4,769	70,846.92
Mexico	573	62,758.35
The Antilles	1,046	31,564.26
Italy	2,285	20,631.95
Total	459,296	7,079,373.59
Expenses of packing, commissions, insurance, and freight as far as the ports of the Republic		507,287.68
Grand total		7,586,661.27
Total in 1885		3,788,134.90
Total in 1886		3,537,399.38
Total in 1887		4,241,407.91
Total in 1888		5,459,568.64

Table showing the imports by articles in 1889.

Articles.	Value.	Duties.
Vegetable oils	$43,698.25	$37,953.32
Aguardiente, brandy, whisky, rum, and aniseed	90,175.40	132,629.85
Barbed wire for fences	47,545.00	(*)
Cotton (thread and cloth)	1,139,326.35	910,469.55
Firearms	4,694.00	5,835.00
Bars of silver	22,400.00	(*)
Boots and shoes	6,589.09	6,127.32
Cinnamon	14,973.18	12,865.50
Wagons and carts	4,172.50	479.83
Carriages	11,490.00	6,527.00
Barley	6,785.24	780.29
White wax	4,832.46	4,296.65
Beer	27,164.20	24,983.75
Preserves, fruits, cheese, sago, tapioca, confectionery, etc	84,689.77	71,268.96
Glassware and panes of glass	61,932.56	49,857.43
Miscellaneous articles	9,598.39	7,936.74
Drugs and medicines	100,774.25	89,693.17
Stearine in candles and in cakes	28,168.40	3,259.36
Matches	41,653.68	36,926.53

*Free.

Table showing the imports by articles in 1889—Continued.

Articles.	Value.	Duties.
Flour	$155,322.00	$163,487.52
Agricultural implements of iron, iron in bars, sheet-iron, nails, and iron tools for workmen	122,659.35	94,845.67
Wool (thread and cloth)	344,798.44	309,059.43
Linen (thread and cloth)	31,385.45	27,651.30
China	72,791.31	65,265.14
Wood for building	67,598.79	(*)
Machinery for agriculture and fabrile industries	59,176.20	6,805.26
Material for railroads, telegraph, and electric light	526,935.54	(*)
Haberdashery and hardware	71,789.15	62,657.46
Gold coin	59,220.00	(*)
Silver coin	2,849,078.00	(*)
Wooden furniture	12,843.28	15,185.35
Articles for charitable institutions and for public instruction	68,496.76	(*)
Paper of all kinds	53,620.41	22,993.84
Fresh potatoes	7,880.60	(*)
Petroleum	26,354.95	19,768.33
Pianos	15,790.00	9,325.00
Dressed hides	41,263.24	30,074.20
Jewelry and fine watches	81,970.00	9,426.55
Empty sacks	62,350.20	(*)
Common salt	4,678.25	5,189.40
Silk (thread and cloth)	191,205.80	159,992.64
Hats of all kinds	75,591.36	65,330.70
Iron roofs and pipes	28,743.00	3,305.61
Wheat	26,167.39	14,049.80
Utensils for privileged industries	11,485.50	(*)
Wines and sweet liquors	154,670.15	134,159.34
Total	7,079,373.59	2,700,119.01
Costs, charges, commissions, freight, etc	507,287.68	.....
Grand total	7,586,661.27	.....

* Free.

REVENUE AND EXPENDITURES.

Table showing the revenue of Guatemala in 1889.

Articles.	Amount.	Articles.	Amount.
Monopolies:		Various revenues:	
Liquors	$1,811,773.17	Fines	$11,433.90
Gunpowder	24,460.50	Matriculations	321.23
Saltpeter	10,553.62	Unclaimed lands	38,442.55
Tobacco	68,970.08	Quitrents	9,784.76
Customs:		Confiscations	1,571.76
Imports	2,700,119.01	2 per cent. monthly from the salaries of Government employés and applied to pension fund	14,260.98
Exports	552,045.43	Sale and exchange of land, etc	3,672.82
Reshipments	1,209.68	Inheritances	2,493.09
Taxes:		Postal service	50,643.51
Paper with Government seal	146,617.97	Telegraph	106,508.36
Stamps	20,815.76	Revision of duties on imports	42,293.70
License for commercial books	6,337.00	Total	6,102,172.92
Stationary property (land, etc.)	114,894.73	General expenses	516,260.60
Exemption from military service	11,412.50	Net revenue	5,585,912.32
Making and repairing roads	102,284.93		
Slaughter-house licenses	165,880.97		
Flour	41,525.57		
Salt	41,845.34		

NOTE.—Deficit in postal service and telegraph of $84,959.45.

Table showing the public debt of Guatemala.

Description.	Amount.	Description.	Amount.
Home debt:		Home debt—Continued:	
Consolidated	$6,495,062.04	Bonds on coffee exportation	$384,188.00
Paper money	1,129,968.00	Notes payable in cash	621,949.37
Consolidated documents not converted into bonds	17,752.86	Total	8,955,690.28
Maturing debts	111,753.00	Foreign debt (£922,700)	4,613,500.00
Convertible into certificates, according to decree No. 421	195,017.01	Grand total	13,569,190.28

Statement showing the customs receipts of Guatemala in 1889.

Guatemala	$1,974,442.79
Retalhulen	485,866.60
Izabal	177,906.44
Champeriço	36,477.84
Ocós	25,425.34
Total	2,700,119.01
Total in 1885	1,487,039.63
Total in 1886	1,703,845.84
Total in 1887	2,253,899.86
Total in 1888	2,286,864.69

CHARGES OF THE COMPAÑIA DE AGENCIAS DE GUATEMALA (LIMITED).

PORT OF SAN JOSÉ.

Unloading.

Cloth of all kinds, boots and shoes, hats, small wares, books, paper, wax, preserves, medicines, etc	per cwt...	$0.50
Furniture of all kinds, fine china in boxes or barrels, carriages, pianos, etc	do.....	.60
Liquors of all kinds, china in crates, glassware in boxes, tin, paints and oils for the same, candles, windowpanes, iron nails, pickaxes, smoothing irons, agricultural implements, rubber or leather belts for machinery	per cwt...	.40
Iron in bars, tires, sheet-iron, axles, wheels, molds for sugar, petroleum, naphtha, telegraph wire, barbed wire, cocoa, tar	per cwt...	.30
Flour, barley, tallow in barrels, maize, rice, lard, empty sacks	do.....	.25
Wheat, pitch	do.....	.20
Corn, salt	do.....	.12
Machinery:		
Less than 1,000 pounds	do.....	.30
From 1,000 pounds to 2 tons	do.....	.50
From 2 to 3 tons	do.....	.75
From 3 to 4 tons	do.....	1.00
From 4 to 5 tons	do.....	1.25
Every additional ton	do.....	.25
Wood for building	per 1,000 feet...	6.00
Gold and jewelry		0½ per cent.
Empty iron tanks or barrels	per cwt...	.12½
Potatoes	do.....	.18
Horses and cattle	per head...	10.00

Loading.

Cocoa	per cwt...	$0.30
Coffee, lead	do.....	.25
Cochineal	do.....	.40
Indigo, rubber, deerskin, calfskin	do.....	.50
Brown sugar	do.....	.12½
Hides	do.....	.10
Woolen clothing and other merchandise	per cubic foot...	.15
Ballast and water	per ton...	4.00
Passengers with 100 pounds of baggage	each...	1.00
Excess of baggage	per pound...	.01
Horses and cattle	per head...	10.00
Wood in planks	per 1,000 feet...	6.00
Aguardiente	per cwt...	.20
Gold	0⅛ per cent.	

Commissions.

Receiving and dispatching vessels	32.00
Contracts for freight, etc	2½ per cent.
Collecting	2½ per cent.
Invoicing	.25

Franking bills of lading and stamps, according to the tariff of the Government.

Examination of goods.

Bales of cotton	each...	.12
Boxes of merchandise	do.....	.25
Machinery, flour, liquors, oil	do.....	.05
Iron in bundles	do.....	.05

Articles not specified will be adjusted to the foregoing charges.

WHARF RATES AT SAN JOSÉ.

Imports.

(1) Merchandise, furniture, pianos, musical instruments, carriages, iron safes, hops, and all other articles not specified in this tariff	per cwt...	$0.50
(2) Wines, liquors, oil, cocoa, alcohol, beer, petroleum, paints, turpentine, medicinal waters, tallow, and grease	per cwt...	.30
(3) Iron in the rough, ironware, china, flour, glassware, machinery, tar, cement, carts, wheels, doors, windows, manure, salt, lime, and bricks	per cwt...	.25
(4) Naphtha in iron tanks	do.....	.20
(5) Wheat, barley, corn, rice, beans, and other cereals; hay, oats, bran, pitch, empty sacks for exporting fruit, wood for building, coal, and potatoes	per cwt...	.12

Exports.

(1) Cochineal, indigo, and woolen clothing	do.....	.50
(2) Cocoa, rubber, quinine bark, sarsaparilla, vanilla, deerskin, goatskin, calfskin, soles for shoes, plants, skins of birds, machinery, hardware, mineral specimens, and all other articles not specified in this tariff	per cwt...	.32
(3) Coffee	do.....	.25
(4) Rice, corn, beans, and other cereals; horn, lead, and metals of small value; fruit, potatoes, and provisions of all kinds; hay, oats, bran, and barley	per cwt...	.12
(5) Sugar, fine and coarse	do.....	.05
(6) Wood of all kinds	per 1,000 feet...	3.00
(7) Undressed skins	each...	.08

Imports and exports.

Horses	per head...	$4.00
Cattle	do.....	2.00
Small animals and dogs	do.....	1.00
Birds in cages	per cage...	1.00
Passengers with 100 pounds of baggage	each...	1.00
Baggage in excess	per cwt...	.50
Wood, ballast, water	per ton...	1.00

For ships.

Captains who wish to make use of the wharf for themselves or crews will pay as follows:

Ships of 100 tons or less	$6.00
Ships of from 101 to 200 tons	10.00
Ships of more than 200 tons	16.00

Freight Rates of the Central Railroad of Guatemala.

NOTICE.

The managers of the Central Railroad of Guatemala reserve the right to increase the prices in the following tariff (within the limits of their concession) or to reduce the same in all or in part, according to circumstances.

IMPORTS.

First class.—For the entire distance from the port of San José to the city of Guatemala, $1.50 per cwt., $30 per ton of 2,000 pounds.

Jewels and jewelry of all kinds, harness, chandeliers, bran, turpentine, trunks, barrels or casks, boxes, baskets, empty demijohns and glass vessels, buckets, valises, billiard tables (not set up), painters' brushes, pictures, mattresses, beds, wagons in sections, baby carriages, cinnamon, boots and shoes, dressed leather, wax (crude or manufactured), metallic cartridges, brushes, horsehair, cork, drugs, statues, baggage without declared value, rifles and firearms of all kinds, brooms, spices, looking-glasses of all kinds, macaroni, Chinese lanterns, matches, cages, toys, scientific or musical instruments, lamps, miscellaneous parcels, lanterns, hops, furniture in sections, marble, moldings, light machinery (not exceeding 200 pounds), wicks; materials for telegraph, telephone, and electric light; samples, umbrellas, parasols, perfumery, Venetian blinds, mattings, combs, live plants, feather dusters, boilers (up to 20 gallons), clocks, wheels, scales, saddles, ready-made clothing, chairs in sections, hats, tea urns; kitchen utensils of iron, copper, tin, or any other kind of metal; velocipedes, zarrandas, and money at one-fourth of 1 per cent., under the unalterable condition that the consignee binds himself to receive every remittance immediately upon the arrival of the train at its destination, the managers refusing to hold themselves responsible if this condition is neglected.

Second class.—For the entire distance from the port of San José to the city of Guatemala, $1.25 per cwt., $25 per ton of 2,000 pounds.

Groceries, sugar, quicksilver, mineral waters, rice, oils of all kinds for lighting, olive oil, machine oil, and oil for painting (excluding castor oil, cod-liver oil, oil of almonds, and copaiba oil, which are drugs), starch, brass in bars, blacking, varnish, buttons, pitch, preserves, eatables, provisions, sperm and wax candles, hemp, beer in boxes or barrels, glassware and crockery in boxes, chocolate, copper in bars or plates, confectionery, tin in bulk, tow, stoves, hardware of all kinds that are not specified, belts for machinery, dried or preserved fruits, cloth of all kinds; articles manufactured of cotton, wool, linen, silk, or mixed; kerosene oil,

grease, yarn for knitting, thread, forms for shoes, cane work, books, tin in sheets, brass in sheets, lard, butter, machinery weighing more than 400 pounds and less than 4,000 pounds or of 40 cubic feet, ammunition, maizene, molds for sugar, playing cards, writing paper, writing materials, paints, paper for printing, wrapping paper, wall paper, petroleum, presses of metal or wood, doors, ironmongery, tobacco in raw material or manufactured, windows and blinds, agricultural implements, plain glass, wines and liquors of all kinds, chalk, zinc in bars or sheets.

Third class.—For the entire distance from the port of San José to the city of Guatemala, $1 per cwt., $20 per ton of 2,000 pounds.

Cotton in raw material, hard and soft coal, wood prepared for houses, cement, stearine or sperm in cakes, bricks, manure, flour, ice, common soap in boxes, corn, slates for roofs; lead, iron, and steel in bars, ingots, packages, or sheets; empty sacks. Flour by entire carload of 200 cwts. will be taken at the rate of $18 per ton for the 75 miles.

Special classes.—Importation, exportation, and local, according to special agreement.

Animals of all kinds, horse cars set up, carriages, pianos, billiard tables set up, furniture set up, articles of more than 40 cubic feet or 4,000 pounds, tiles and shingles, kindling wood, wood in the rough, barges or small boats, baggage without declared value, dynamite, gunpowder, fulminants, sulphuric acid, muriatic acid, nitric acid, and other inflammable and dangerous substances. Wheat and barley at $17 per ton for the 75 miles.

The managers reserve the right to charge by the cubic foot on any of the different classes, by special measure and agreement, any package that does not weigh at least 30 pounds.

Notices.

Every package that arrives at the port manifested simply as merchandise will pay first-class tariff, and in no case will a reduction be made, even though it may be proved afterwards that the respective contents belonged to the second or third classes.

No remittance will be made for less than 25 cents. Baggage and all accounts for freight less than $4 will be charged in advance.

Every package which is found in imperfect condition must be repaired at cost of the sender before its being admitted into the trains; and, if that is not possible, the simple mention in the manifest that the package is found to be in bad condition will relieve the managers of the railroad from all responsibility.

EXPORTS.

Products of the country from Guatemala to the port of San José.

Oils of the country, starch, indigo, cocoa, cochineal, seeds, sarsaparilla, rubber, unbleached wool, live plants, and grains not specified	per cwt...	$1.00
Hides or skins in packs, fibers, ramie, tobacco	do.....	.75
Corn, beans, mineral waters	do.....	.50
Coffee	do.....	.60
Sugar, rice, mineral specimens	do.....	.40
Curiosities of the country	do.....	1.50
Loose hides	each...	.20

Money at one-fourth of 1 per cent. under the unalterable condition that the consignee binds himself to receive every remittance immediately upon the arrival of the train at its destination, the managers refusing to hold themselves responsible if this condition is neglected.

Animals, dangerous freight, and freight of more than 40 cubic feet or 2 tons, according to special agreement.

Baggage without declared value will pay according to tariff of first class of imports.

Table showing the exports of coffee from the port of Livingston during the quarter ended December 31, 1890.

Destination.	Quantity.	
	Bags.	*Pounds.*
Boston	781	134,972
Hamburg	529	62,879
London	587	74,229
New Orleans	19	2,520
New York	380	52,274
Havre	10	1,150
Total	2,306	328,024

SAMUEL KIMBERLY,
Consul-General.

UNITED STATES CONSULATE-GENERAL,
Guatemala, January 15, 1891.

PERUVIAN PETROLEUM.

REPORT BY MINISTER HICKS, OF LIMA.

The refined kerosene manufactured by the London and Pacific Petroleum Company at Talara, near Paita, in northern Peru, has so far displaced the American article that it is now impossible to purchase anything but the Peruvian kerosene in Lima. The first shipment to this market from Talara was made in December, 1889, and now almost the whole west coast of South America is supplied with the Peruvian article. The London and Pacific Company is rapidly extending its works and increasing its manufacturing capacity, besides extending its shipping facilities by the purchase of more steamers. Ultimately it is the design of the company to extend its trade to Japan, China, and the Hawaiian Islands, where it is almost certain to come in conflict with the American article.

Besides the London and Pacific Company, another company, owned principally by F. G. Piaggio, at Callao, is operating an establishment at Zonitos, near Talara, and its product is also on sale in this market.

Three new companies have been organized in London since January 1, 1891, with large capital, for the purpose of working these petroleum beds between Paita and Tumbez, and this industry promises to become the most important in Peru.

While the Pennsylvania and Ohio oil region is confined to somewhat narrow limits, the Peruvian oil fields are said to cover an extent of 7,500 square miles.

JOHN HICKS,
Minister.

UNITED STATES LEGATION,
Lima, April 27, 1891.

HARVEST PROSPECTS IN FRANCE AND EUROPE.

REPORT BY COMMERCIAL AGENT GRIFFIN, OF LIMOGES.

FRANCE.

The National Millers' Association of France has just issued an estimate, founded on very carefully collected data, of the probable wheat harvest of France and Europe for 1891. In order to meet the demand of France until the harvest is gathered in 1892, it is necessary to see how much wheat was yielded by the crops of 1890 and the quantity imported.

The official figures of the yield for 1890, as given by the minister of agriculture, are 119,436,827 hectolitres.* There is a monthly consumption of 9,000,000 hectolitres, requiring for a year's supply 108,000,000 hectolitres; about 15,000,000 hectolitres are used for seed; so that the present average need of wheat in France per annum is 123,000,000 hectolitres. This year there must be added to this amount 5,000,000 hectolitres, which is required for resowing where the grain had been frozen or injured, making a total for this year of 128,000,000 hectoliters.

	Hectolitres.
Crop of 1890	119,436,872
Importations up to April 30, 1891	11,929,849
Total	131,366,721
Consumption for 9 months, including seed	101,000,000
On hand to meet demand up to August, 1891	30,366,721
3 months' consumption	27,000,000
Balance	3,366 721

The estimated yield of wheat for 1891 will be 82,779,000 hectolitres if the weather and all other conditions are favorable. This is the maximum estimate; it will be 31 per cent. less than the harvest of 1890.

	Hectolitres.
Annual consumption	123,000,000
Probable harvest	82,779,000
Deficit to be supplied by importation	40,221,000

The average price paid for wheat under favorable circumstances is 23 francs per hectolitre; consequently the sum of 925,000,000 francs will be spent during the next 12 months for wheat.

EUROPE.

The production of Europe† in 1890 and the estimated production of 1891 are as follows:

	Hectolitres.
Production of Europe in 1890	225,000,000
Estimated production in 1891	111,000,000
Deficit to be supplied by foreign countries	114,000,000

* 338,961,715 bushels, the hectoliter being equal to 2.838 bushels.

† Production of Europe outside of France.—*Note by Department.*

Russia, Tunis, Egypt, Roumania, and some of the Danubian provinces will have a fair harvest; in Hungary it will be below the average this year.

The estimates given by the millers are optimistic. The desire to create an impression that there is a better supply than really exists is all done with a purpose; they want to buy grain as cheap as possible in those fortunate countries that have of their abundance to export.

In 1890 7,148,878 hectares (17,687,737 acres) were sown with wheat, and the average yield was 16.7 hectolitres per hectare; 15,000,000 hectolitres were used for seed; making not quite 8 bushels for 1 bushel.

Not only France, but all Europe turns longingly toward the wheat fields of the United States. Last year many hoped that South America would help supply the deficit, especially the Argentine Republic, but to-day no mention is made of those countries; all hope is built upon our harvest. The facts, as recently stated, are that the bread of Europe must come from the United States.

WALTER T. GRIFFIN,

UNITED STATES COMMERCIAL AGENCY, *Commercial Agent.*

Limoges, June 23, 1891.

TIN-MINING IN THE STRAITS SETTLEMENTS.

REPORT BY CONSUL WILDMAN, OF SINGAPORE.

The passage of the new tariff law, which placed a duty on tin plate, has had a beneficial effect on the tin-mining of the Malay Peninsula insomuch as it increased the demand for pig tin in the United States. Formerly the tin that was destined for tin plate to be used in the United States was shipped in large quantities to different parts of the United Kingdom, where it was manufactured into tin plate and the plate exported to the United States instead of the raw material.

With the duty on tin plate this industry became less profitable to the English manufacturer, and, instead of shipping the manufactured article, the export of pig tin direct has in a great measure taken its place. In other words, pig tin is now going direct to the United States instead of by the way of Great Britain.

According to statements made by the governor of the Straits Settlements, this consular district mines half of the tin of the world. The export of tin from the Straits Settlements to all countries for the year 1889 amounted to $23,254,023.

The mining of tin forms one of the chief industries of this peninsula, and is carried on principally in the native state of Perak, north of Singapore. The mining is done almost entirely by the Chinese.

The mining is that of flood tin, not rock, and this means that it is taken from the lowlands near the mountains, where it is found in seams or pockets 10 to 20 feet or more below the surface level in the shape of, or appearing like, coarse black sand, with here and there a mixture of tin and small particles of gold (dust). To get at the placer tin means a great upheaval of

soil, pumping of water from the pits, the washing of the exhumed stream tin, and the smelting of the latter. In most places the pumps, washing apparatus, and smelting furnaces are of the most primitive and simple, yet ingenious, character. The ore is smelted into slabs of irregular shape at the mines and sent to Penang and Singapore to be resmelted into marketable slabs or blocks and, at the same time, purified, and then shipped.

The tools used by the natives are very poor and simple, consisting of only a common hoe and a small, flat cane basket. With these the whole of the work is done. A basket, when full, holds about 4 pounds of earth. One of these baskets is placed at either end of a stout bamboo pole, balanced over a laborer's shoulders, carried off, and emptied, while the men with the hoe scrape together more soil and fill other baskets. The washing of the tin is done much in the same manner as our early miners washed for gold dust. The ore is found in Laroot (Perak) in large quantities in a stratum of whitish clay, which is washed in long open troughs, water passing through it, carrying off the soil, leaving the ore lodged against cleats nailed on the bottom of the trough.

The English and German companies now engaged in tin-mining do not take the trouble to smelt the ore at the mines, but ship the sand to Singapore, where large smelteries have been erected.

The price of tin has been quite firm since the passage of the new tariff law, fluctuating slightly between about $31.25 in August, 1890, and $32.80, the present price, per picul (133⅓ pounds).

The quantity and value of tin from the Straits Settlements that finds its way to the United States can hardly be correctly ascertained by the quarterly reports of the colony; for, as I have before pointed out, large quantities of tin, as well as other produce destined for the United States, are shipped via London and Hongkong for reshipment, and consequently are not placed to the credit of the United States. However, the tin that went direct to the United States for the quarter ended September 30, 1890, amounted to $1,157,323, against $4,921,326 credited to the rest of the world, while for the quarter ended December 31, 1890, it amounted to $1,217,930 (an increase of $60,607 over the preceding quarter), against $5,626,009 credited to the rest of the world, of which $2,306,921 went to the United Kingdom.

About one-tenth of the carrying of tin between this port and the United States is done in American bottoms. The firms shipping from here are English and German. There is no American capital engaged in the production or exportation of tin, although the United States is such a heavy buyer.

In my judgment, if an American house were to be established in Singapore, it would control at once not only all the shipments of tin to the United States, but the shipment of nearly all of the $11,000,000 of exports from the Straits Settlements to the United States.

ROUNSEVELLE WILDMAN,

UNITED STATES CONSULATE, *Consul.*

Singapore, May 12, 1891.

AN OPEN ROAD TO TRADE WITH SPAIN.

REPORT BY CONSUL TURNER, OF CADIZ.

It would be highly gratifying to meet here a few active Americans whose object would be the introduction and sale of American goods. I say it would be highly gratifying, for I have an abiding faith that such men would be the pathfinders of a magnificent market for American products. Within the last few months two lines of steamers have been established between Cadiz and New York, the New York agents of which are Hagemeyer & Brunn. A few days ago one of them brought to this port several hundred barrels of American flour and several saloon passengers, all American tourists.

While thinking this over, it occurred to me that some of our enterprising exporters could send a few live, Spanish-speaking business men over here by one of these steamers. They could spend a few weeks in Lisbon (the steamers call there), and, after prospecting in Portugal, come to Cadiz and do profitable work. When through working this part of Spain, they might return to New York by way of the Azores, where, I have no doubt, something could be done. The exporters, who would find the acceptance of this invitation profitable, should send men prepared to introduce some or all of the following articles: Staves, agricultural implements, petroleum, furniture, drugs and patent medicines, canned goods, breadstuffs, meats, household novelties, rubber goods, cotton goods, hardware and cutlery, machinery, paper, etc.

If this proposition seems quite experimental to an exporter of any one of the articles named, why can he not unite with the exporters of other non-conflicting commodities and jointly make the experiment? Or, better still, let the exporters of the goods named form a syndicate to make a thorough test of this suggestion.

It is not my intention to give any figures; those who care for amounts, values, tariffs, etc., are referred to a former report. All I desire to say is that Spain is buying large quantities of goods of other nations that we should and can sell her, but that we can not do it without making an effort.

If American salesmen do come, they should be prepared to explain everything regarding discounts, time, exchange, and just what it will cost to put the goods in the merchant's warehouse or on the shelf of his store, freights and duties paid. The question as to whether the goods are to be paid for before or after they are received is not an unimportant one and should be well understood.

Shortly after the publication of one of the reports from this consulate, a letter was received from a meat-packing firm having extensive interests in Kansas City and Chicago. They asked for the names of merchants who might be induced to handle their goods.

Some time later I was informed by a Cadiz merchant that he had made a trial order for lard, hams, shoulders, and canned meats. He sent his order

to Kansas City, and the goods were sent from New York, at which place the firm has an office to attend to export business. Much to his surprise, he was drawn on for the amount of the order as soon as the bill of lading issued. At that time nearly all goods came by way of England (the greater part still do), and on this account he was made to pay for his goods from 30 to 40 days before he received them. He paid the draft, said nothing, but resolved to have matters better understood next time. The meats and prices proved satisfactory, and he decided to give a larger order. In the meantime the lines of steamers heretofore mentioned were established, and, after having it understood that the seller was to draw on bill of lading at 30 days' sight, he ordered 200 barrels of hams and shoulders, 100 cases of lard, 100 cases of canned meats, etc., requesting that it be shipped to Cadiz by the direct route. In this way he expected to get the goods before the draft became due. This was made September 25 last. Contrary to instructions, the goods were sent via England, as was the first order. They were delayed in transshiping, and reached Cadiz on February 20, 60 days after he had paid the draft, which had been drawn at 30 days' sight, payable at Paris, and attached to bill of lading. He was thus compelled to send orders to his Paris bankers to pay it almost as soon as it was presented, in order to get possession of the bill of lading. This, however, was not the worst, for a new tariff on meats, lards, etc., went into effect January 1, and he was forced to pay a duty that was increased on lard, bacon, and hams from $3 to $10 per 100 kilogrammes. He then sold the goods to retail dealers (he is a wholesaler) and waited from 2 to 6 months for his money. The payment of the increased duty could have been saved had the goods been shipped from England prior to January 1. When this order was given the dealer here was quite enthusiastic about working up a jobbing business in American meats. It is needless to add that his experience acted as a cold bath to his enthusiasm, and that it was an experience largely brought about by the indifference and shortsightedness of the New York branch of the packing firm.

But such things need not happen, and will not if American agents are on the ground. It is mentioned to show, first, that great care should be taken to follow instructions in filling orders received, both as to the route of shipment and the method of settling the account; second, that agents who come here to do business should come fully empowered to arrange and smooth away all like difficulties that may be presented for consideration when business is solicited.

Spain is buying what we sell, and I am sure that no sane business man can long doubt that if a magnetic, Spanish-speaking American salesman were here on the ground orders could be secured. For instance, there is a house in Seville called "Bazar Sevillano;" it has several branch establishments. I passed one of its places of business in Calle Tetuan in the evening just as the front shutters were being pulled down. The shutters were made of corrugated sheet-iron, and you can imagine my surprise when I saw painted on one of them an American flag with forty-two stars. These people advertise

American goods and paint the flag on their shutters to give color to their advertisement. In reality the greater part of their so-called American goods are German imitations. American goods are popular, hence the advertisement.

But the question that naturally suggests itself is, how hard would it be, under such circumstances, for the right kind of salesmen to get an order for genuine American products from this firm and others of like tendencies? Good agents can rapidly develop trade with this country, and those interested will find facts and figures awaiting their investigation and study.

The cost of reaching Cadiz from New York would be from $50 to $70, and perhaps steamers interested in the carrying trade would make special rates to salesmen. Hotel first-class rates are $2.50 per day; railroad fare, first-class about 5½ cents per mile, second-class 4 cents, and third-class 3 cents. Rates on coasting vessels are very much cheaper.

It might be well to call the attention of commission men and importers to the products exported from here to the United States. These are wine, olives, olive oil, cork, licorice root, licorice paste, goatskins, rags, figs, brandy, canary seed, cupreous sulphur ore, fining earth, lead, paintings, raisins, soap, antiquities, etc. In this connection it might be stated that the Seville pottery works sell large quantities of their goods to American tourists each year. These goods, like many others, are sent by their purchasers to Paris or Liverpool, there to be packed for shipment to the United States with articles bought in other European cities. The sales of Spanish lace are also large, but, as it becomes wearing apparel almost as soon as it is bought, it is neither invoiced at Seville nor entered at the custom-house when it arrives in the United States. These things could be profitably imported.

But it is needless to enumerate. Come over and see what can be done, and be assured that this consulate will be pleased to render any assistance in its power to Americans who come here to develop trade.

Before closing I might add that the time should soon come when American tourists will land in Europe at Cadiz, and from there commence their journey through the Continent, returning to the United States by way of England.

R. W. TURNER,
Consul.

UNITED STATES CONSULATE,
Cadiz, May 18, 1891.

Rice in Brazil.—A report upon the cultivation and growth of rice in this consular district would not contain any suggestion of importance to the rice-growers of the United States. Though the lands are adapted to such growth, it is not carried on to any extent. Small patches can be seen here and there only for immediate consumption. The state of cultivation is very rude. None is grown for export, but a very large quantity is imported, chiefly from the Old World.—O. H. DOCKERY, *Consul-General, Rio de Janeiro, February 16, 1891.*

FOREIGN TRADE OF GERMANY.

REPORT BY CONSULAR CLERK MURPHY, OF BERLIN.

German official trade statistics for the year 1890 disclose the following facts, which may be of practical interest:

RAILWAY CARS.

Railway cars, the only article subject to ad valorem duty under the German tariff, were imported in 1890 to the number of 392, valued at 935,000 marks. Of these 361 were imported from Belgium. In 1889 only 58, reappraised at 108,000 marks, were imported. There were exported 922 cars, valued at 2,436,000 marks. Of this number, 384 were sent to Italy, 28 to Holland, 83 to Bulgaria, and 63 to Turkey. The number exported in 1889 was 1,682 (1,122 to Italy, valued at 5,484,000 marks). In 1889 Russia took 250 cars; in 1890 it took only 1. In 1890 3 cars, valued at 5,000 marks, were imported from the United States.

WATCHES.

The total number of watches imported in 1890 was 1,150,090 (1,116,350 in 1889). Of these 1,067,455 were supplied by Switzerland, the United States supplying only 413. The total number of watches exported was 38,827 (25,630 in 1889), 68 being exported to the United States. The chief takers were Russia (10,381), Great Britain (7,221), and Belgium (6,952). Venezuela took 120 gold watches and Mexico 915 silver watches. Chile took 750, Mexico 825, and Peru 671 watches in cases other than gold or silver.

HERRING.

Of salt herring, 1,256,286 barrels were imported and 724 exported. The corrected number for 1889 was, respectively, 1,208,986 and 1,097. The chief suppliers of this demand were Great Britain (568,263 barrels), Holland (334,352 barrels), and Norway (279,445 barrels). The United States furnished only 2 barrels and received in return 105 barrels.

STRAW HATS.

Of untrimmed straw hats, 363,486 were imported (422,903 in 1889) and 2,755,050 were exported (2,844,403 in 1889). The chief suppliers were France (126,501) and Italy (120,156). The chief takers were France (1,655,783), Holland (442,865), Denmark (162,080), and Switzerland (108,760). The United States supplied 112 and received 2,884. Of trimmed straw hats, etc., 45,580 (in 1889, 40,781) were imported and 608,909 (in 1889, 545,952) exported. The chief sources of supply were France (14,243), Austria (10,946), Switzerland (5,589), Holland (5,369), and Great Britain (4,535). The chief markets of sale were Holland (132,065), Norway (54,409), Brazil (34,790), British India (33,608), Chile

(68,051), Sweden (24,382), Russia (26,100), Belgium (19,869), Switzerland (19,474), Denmark (13,245), and Austria (11,148). The United States supplied 18 and received 4,867.

LIVE ANIMALS.

In the year 1890 1,120,619 animals were imported (in 1889, 699,543), as follows:

Animals.	Number.	Animals.	Number.
Horses	83,506	Calves (under 6 weeks of age)	15,059
Cows	106,545	Hogs	596,823
Steers (bulls)	5,515	Pigs (under 10 kilogrammes in weight)	235,546
Oxen	15,538	Sheep	2,801
Young cattle (under 2½ years of age)	58,304	Lambs	982

Of these, the United States supplied 97 horses, 71 cows, 11 bulls, 13 oxen, 532 young cattle, 7 calves, and 2 hogs. Of the horses, Russia supplied 23,960; Belgium, 18,054; Denmark, 14,113; Austria, 10,641; France, 8,081; and Holland, 6,718. Of the cows, Denmark supplied 38,048; Austria, 28,488; Holland, 18,221; Switzerland, 14,678; and France, 6,664. Of the steers, Denmark supplied 3,696; Sweden, 861; and Austria, 490. Of the oxen, Austria supplied 12,485; Denmark, 1,281; France, 798; and Italy, 665. Of young cattle, Denmark supplied 22,386; Austria, 14,738; Switzerland, 5,676; Holland, 9,454; and France, 4,350. Of the calves, Switzerland supplied 11,102; France, 1,838; and Austria, 1,362. Of the hogs, Holland supplied 200,712; Austria, 161,628; Denmark, 111,717; France, 45,664; Italy, 28,458; Belgium, 27,511; Great Britain, 14,869; Russia, 4,019; and Switzerland, 2,201. Of the pigs, Holland supplied 171,264; Belgium, 45,189; France, 12,757; Switzerland, 4,317; and Italy, 1,357. Of sheep, Denmark supplied 1,464 and Great Britain 1,128. Of lambs, Denmark supplied 600 and Austria 260.

Animals were exported to the number of 434,900 (in 1889, 656,630), as follows:

Animals.	Number.	Animals.	Number.
Horses	9,532	Calves (under 6 weeks of age)	2,136
Cows	3,032	Hogs	4,326
Steers (bulls)	253	Pigs (under 10 kilogrammes in weight)	3,896
Oxen	4,466	Sheep	398,820
Young cattle (under 2½ years of age)	3,623	Lambs	4,816

Of these, the United States received 103 horses and 4 sheep.

The chief takers of horses were Switzerland (2,780), Holland (2,154), Austria (1,100), Belgium (1,029), France (771), and Denmark (627); of cows, Switzerland (2,430); of steers, Switzerland (197); of oxen and young cattle, Switzerland (4,384 and 3,200, respectively); of calves, Austria (1,927); of hogs and pigs, Switzerland (4,017 and 1,397, respectively); of pigs

Austria took 2,472; of sheep, Belgium took 162,178 and Switzerland 33,270; of lambs, Belgium took 3,557 and Great Britain 1,165.

Table showing the imports and exports of animals.

Animals.	Imports.		Exports.	
	1890.	1889.	1890.	1889.
	Number.	*Number.*	*Number.*	*Number.*
Cows	106,545	93,241	3,032	5,227
Steers	.....	.....	253	615
Oxen	.....	.....	4,466	5,057
Young cattle	58,304	48,243	3,623	5,049
Calves	.....	.....	2,136	4,201
Hogs	596,823	327,649	4,326	10,122
Pigs	235,546	108,084	3,896	9,697
Sheep	2,801	1,341	398,820	597,972
Lambs	.....	.....	4,816	9,217

Exportation of every sort of animal, except the horse, decreased.

It will be observed that only in the case of sheep and lambs did the exportations exceed the importations. The German official statistics do not show a result in this branch flattering to our trade. In 1889 of 177,647 cows, steers, oxen, young cattle, and calves we supplied 1,613, or nearly 10 per cent. In 1890, however, German official statistics show that of 200,961 such animals which crossed the German customs frontier into Germany only 634 (less than one-third of 1 per cent.) came from the United States.

With the exception of the above articles, all wares imported into Germany are subject to weight duty.

The following tables show in detail Germany's foreign trade in the year 1890:

Table showing the imports into Germany from foreign countries in 1890.

Articles.	Total.	United States.		France.	Great Britain.	Austria.
		Quantity.	Per cent.			
	100 *kilos.*	100 *kilos.*		100 *kilos.*	100 *kilos.*	100 *kilos.*
Asphalt	270,600	539	0½	15,552	18,780	.....
Bran, rice waste, etc.	3,185,949	18,251	0½	.....	152,417	785,659
Candles	1,650	.....	.....	.....	.....	272
Cement	222,361	1	.....	56,170	.....	78,417
Clothing and underclothing	3,254	64	2	835	692	657
Coal	110,631,917	7	.....	.....	32,563,971	70,722,675
Cotton:						
Raw	2,508,408	1,251,447	50	.....	86,721	78,519
Yarn	188,164	.....	.....	.....	162,488	.....
Wares	14,273	47	0½	1,385	10,361	.....
Drugs, chemicals, and colors	7,701,948	229,266	3	.....	.....	.....
Dyewood	.....	.....	11	.....	.....	.....
Dyewood extracts	.....	.....	25	.....	.....	.....
Superphosphates	.....	.....	3	.....	.....	.....
Turpentine oil	.....	.....	50	.....	.....	.....
Bone black	.....	.....	15	.....	.....	.....

Table showing the imports into Germany from foreign countries in 1890—Continued.

Articles.	Total.	United States.		France.	Great Britain.	Austria.
		Quantity.	Per cent.			
	100 *kilos.*	100 *kilos.*		100 *kilos.*	100 *kilos.*	100 *kilos.*
Flax, hemp, and jute	1,834,966	1,052				
Flax	606,912					
Hemp	518,669					
Jute	709,385				144,511	
Fowl and eggs	725,934	1				
Fowl	185,217					55,199
Eggs	540,717					323,869
Fancy wares, clocks, etc	1,699	46	3	445	299	418
Glass and glassware	135,401	45				42,327
Grain and agricultural products	37,649,562	4,456,402	11			
Wheat	6,723,444					
Rye	8,762,144					
Oats	1,876,116					
Buckwheat	253,713					
Barley	7,349,670					
Indian corn	5,619,322	3,665,979	65			
Potatoes	987,894	(*)	(*)			134,031
Groceries, wines, etc	5,786,782	250,234	4			
Beer	270,609	171				246,566
Arrack, cognac, and rum in casks	47,084	494	1	23,502	5,014	
Alcohol	659			621		
Other brandies and whiskies	4,462	36	1	2,324		
Wine and must in casks	708,019	1,099		320,349		137,517
Champagne	21,331	14		20,936		
Wine in bottles	7,779	49	0½	4,865		
Butter and margarine	89,029	16,797	19			30,217
Fresh slaughtered beef	242,528	55,838	23			40,509
Fish, salt, dried, etc	94,140	741	0¾			
Tropical fruits	218,222	42				33,455
Currants	101,128	39				7,562
Raisins	163,273	150				26,362
Dried almonds	48,597	4		3,067		3,509
Pepper, black and white	42,727	47			14,088	
Coffee, raw	1,180,795	4,612	0½			
Cacao beans, raw	62,467	3,374	5	4,500	7,221	
Cheese	88,345	95		5,613		
Chicory	13,402			10,586		
Dried fruit and berries	265,693	24,631	9	9,811		169,433
Chocolate, etc	7,440	1		1,600		
Dextrine, etc	1,290	13	1			666
Potato flour and starch	696					
Other starch	5,909	1,720	3		1,292	
Bakers' wares	1,661	28	1½			464
Grits, etc	16,259	318	2	13,389		
Flour and meal	142,418	2,346	1½			135,149
Rice	932,448	1,003				
Salt	266,534	58			226,795	
Molasses	1					
Starch, sugar, maltose, etc	46					
Sirup from sugar manufacture	26,465	2,814	10		20,718	

* Importation of potatoes from the United States is prohibited.

Table showing the imports into Germany from foreign countries in 1890—Continued.

Articles.	Total.	United States.		France.	Great Britain.	Austria.
		Quantity.	Per cent.			
Groceries, wines, etc.—Continued.						
Tobacco:	100 *kilos.*	100 *kilos.*		100 *kilos.*	100 *kilos.*	100 *kilos.*
Leaves, unworked	443,397	102,651	23	.....	.....	.....
Stems, ribs, and chewing	31,302	30,425	97	.....	.....	.....
Cigars	3,810	126	3½	.....	.....	.....
Leaves entirely or half stripped	352	32	10	.....	.....	.....
Smoking	4,173	64	1½	.....	.....	.....
Tea	19,944	1	.....	.....	5,709	.....
Crystallized starch and fruit sugar, etc.	89	56	62	.....	.....	.....
Sugar	59,894	380	0¾	.....	19,329	.....
Guano (except mineral)	479,954	9,120	2	.....	.....	.....
Hair, feathers, and bristles	103,066	1,044	1	.....	.....	.....
Feathers	61,596	.....	.....	.....	.....	27,359
Bristles	27,109	.....	.....	.....	.....	.....
Hair	.....	.....	.....	.....	.....	1,533
Hides and skins	833,863	44,645	5	81,379	55,232	35,434
Hops	13,520	14	.....	.....	.....	13,131
Leather and leather goods	95,968	3,886	4	.....	40,110	.....
Fine leathers	6,468	.....	.....	.....	.....	4,073
Gloves	1,159	.....	.....	.....	.....	901
Linen, jute, and manilla yarn, thread, and rope	134,479	27	.....	.....	15,758	67,067
Linen yarn	110,400	.....	.....	.....	7,621	66,088
Linen goods	10,650	32	0⅓	.....	5,378	2,917
Machines and instruments:						
Pianos, organs, etc.	754	74	10	445	74	.....
Other musical instruments	2,798	690	24	.....	.....	999
Locomotives and stationary engines	27,212	.....	.....	.....	19,347	5,214
Sewing machines and parts thereof	29,510	8,959	30	.....	16,769	2,641
Steam-boilers	5,067	12	0¼	.....	1,612	.....
Other machines and parts thereof	506,588	22,569	4	34,278	302,379	13,128
Metals and metal wares:						
Iron	20,115,162	9,023	.....	.....	.....	.....
Ore	15,221,808	226	.....	805,934	.....	1,007,122
Wares	.....	.....	.....	.....	3,441,664	.....
Copper, etc.	343,137	13,731	1	.....	.....	.....
Copper ore	314,084	3,225	.....	4,499	246,572	.....
Quicksilver	.....	.....	.....	.....	.....	2,688
Copper wares	.....	.....	.....	9,290	5,874	4,610
Lead	135,498	13	.....	.....	22,436	.....
Tin	90,068	372	0⅓	.....	39,174	.....
Zinc	87,065	53	.....	.....	22,564	9,211
Petroleum	6,460,735	5,489,887	85	.....	.....	53,727
Mineral grease	523,093	144,778	28	.....	46,860	.....
Oils and fats	2,038,894	835,539	41	.....	433,272	.....
Lard	910,277	755,739	83	.....	.....	.....
Paper and paper wares	216,746	230	.....	.....	.....	71,406
Pottery, porcelain, etc.	2,085,852	271	.....	.....	.....	.....
Bricks—						
Building	1,523,375	.....	.....	.....	.....	391,653

Table showing the imports into Germany from foreign countries in 1890—Continued.

Articles.	Total.	United States.		France.	Great Britain.	Austria.
		Quantity.	Per cent.			
Pottery, porcelain, etc.—Continued.						
Bricks—Continued.	100 *kilos.*	100 *kilos.*		100 *kilos.*	100 *kilos.*	100 *kilos.*
Fire	512,252	.....	.....	.....	318,604	.....
Pottery	.....	.....	.....	.....	8,731	14,821
Porcelain	7,175	.....	.....	1,107	.....	4,383
Rags	270,069	966	0½	38,259	17,615	.....
Rubber and gutta-percha wares	38,895	494	1¼	.....	17,096	.....
Silk	40,960	2	.....	5,272	.....	.....
Silk goods	5,630	5	.....	2,874	.....	.....
Slate	686,949	.....	.....	67,725	478,619	35,730
Tar, pitch, and turpentine	1,079,910	506,489	47	84,176	107,510	.....
Turpentine	722,256	506,377	70	.....	.....	.....
Wood and wooden wares	34,180,217	532,450	1½	.....	.....	.....
Raw cork	80,011	.....	.....	.....	.....	.....
Tanning bark	1,054,409	.....	.....	289,923	.....	576,202
Building timber, etc	.....	.....	.....	.....	.....	11,103,028
Manufactures	225,496	12,418	5	.....	.....	57,836
Wool	1,592,580	8,103	0½	.....	.....	.....
Artificial	122,400	22	.....	.....	47,636	12,923
Sheep	1,286,081	8,007	0⅝	.....	269,011	.....
Woolen goods	17,235	32	0⅛	2,500	11,434	1,072
Yarn	184,099	74	.....	10,844	128,643	5,900
Total	243,113,842	13,830,720	5½	.....	.....	.....

Articles.	Holland.	Belgium.	British India.	British Central America.	Switzerland.	Italy.
	100 *kilos.*	100 *kilos.*	100 *kilos.*	100 *kilos.*	100 *kilos.*	100 *kilos.*
Asphalt	.....	.....	.....	98,868	89,290	14,836
Bran, rice waste, etc	293,049	159,700	.....	.....	.....	.....
Candles	1,704	.....	.....	.....	.....	.....
Cement	33,658	.....	.....	.....	21,867	.....
Clothing and underclothing	405	.....	.....	.....	.....	.....
Coal	.....	6,142,491	.....	.....	.....	.....
Cotton:						
Raw	.....	378,045	500,596	.....	.....	.....
Wares	.....	.....	.....	.....	1,449	.....
Drugs, chemicals, and colors (dyewood)	.....	.....	.....	115,864	.....	.....
Flax, hemp, and jute:						
Hemp	.....	.....	.....	.....	.....	106,348
Jute	.....	.....	523,811	.....	.....	.....
Glass and glassware	.....	60,539	.....	.....	.....	.....
Grain and agricultural products (potatoes)	283,612	110,251	.....	.....	.....	.....
Groceries, wines, etc.:						
Arrack, cognac, and rum in casks	6,162	.....	.....	7,404	.....	.....
Butter and margarine	13,144	.....	.....	.....	.....	.....
Fresh slaughtered beef	33,658	.....	.....	.....	.....	.....
Fish, salt, dried, etc	80,233	.....	.....	.....	.....	.....
Tropical fruits	.....	.....	.....	.....	.....	55,690
Currants	14,261	.....	.....	.....	.....	.....

Table showing the imports into Germany from foreign countries in 1890—Continued.

Articles.	Holland.	Belgium.	British India.	British Central America.	Switzerland.	Italy.
Groceries, wines, etc.—Continued.	100 *kilos.*	100 *kilos.*	100 *kilos.*	100 *kilos.*	100 *kilos.*	100 *kilos.*
Raisins	11,596	.....	.....	.....	.....	13,628
Dried almonds	.....	.....	.....	.....	.....	32,205
Pepper, black and white	2,775	.....	22,318	.....	.....	.....
Coffee, raw	286,849	.....	.....	.....	.....	.....
Cacao beans, raw	3,543	.....	.....	.....	.....	.....
Cheese	38,155	.....	.....	.....	40,920	.....
Chicory	1,581	.....	.....	.....	.....	.....
Dried fruits and berries	3,507	5,397	.....	.....	.....	4,232
Chocolate, etc	5,155	.....	.....	.....	.....	.....
Other starch	.....	.....	1,466	.....	.....	.....
Bakers' wares	.....	.....	.....	.....	344	.....
Rice	88,875	.....	702,706	.....	.....	.....
Tobacco:						
Leaves, unworked	92,496	.....	.....	.....	.....	.....
Cigars	675	.....	.....	.....	.....	.....
Sugar	21,341	.....	.....	.....	.....	.....
Tea	3,712	.....	.....	.....	.....	.....
Guano (except mineral)	60,418	100,713	.....	.....	.....	.....
Hair, feathers, and bristles (hair)	.....	2,507	.....	.....	.....	.....
Hides and skins	.....	121,568	44,405	.....	.....	.....
Linen, jute, and manilla yarn, thread, and rope	.....	39,092	.....	.....	.....	.....
Linen yarn	.....	28,943	.....	.....	.....	.....
Machines and instruments:						
Pianos, organs, etc	57	.....	.....	.....	.....	.....
Other musical instruments	.....	.....	.....	.....	659	.....
Locomotives and stationary engines	1,001	1,093	.....	.....	.....	.....
Steam-boilers	1,954	.....	.....	.....	505	.....
Other machines and parts thereof	29,801	39,465	.....	.....	55,541	.....
Metals and metal wares:						
Iron ore	4,950,889	998,353	.....	.....	.....	.....
Copper ore	20,523	6,288	.....	.....	.....	.....
Lead	.....	86,733	.....	.....	.....	.....
Tin	41,963	.....	.....	.....	.....	.....
Zinc	.....	45,505	.....	.....	.....	.....
Petroleum	153,257	309,168	.....	.....	.....	.....
Mineral grease	47,613	52,564	.....	.....	.....	.....
Oils and fats	321,149	.....	.....	.....	.....	.....
Bricks (building)	660,859	.....	.....	.....	.....	.....
Pottery	.....	7,039	.....	.....	.....	.....
Rags	36,729	77,340	.....	.....	25,638	.....
Rubber and gutta-percha wares	.....	.....	2,466	.....	.....	.....
Silk	.....	.....	.....	.....	17,589	13,896
Silk goods	.....	.....	.....	.....	1,474	.....
Slate	.....	77,598	.....	.....	26,297	.....
Tar, pitch, and turpentine	97,864	38,063	.....	.....	49,309	.....
Wood and wooden wares (manufactures)	34,104	.....	.....	.....	.....	.....
Wool:						
Artificial	.....	39,094	.....	.....	.....	.....
Sheep	.....	232,892	.....	.....	.....	.....
Woolen goods (yarn)	.....	28,948	.....	.....	9,276	.....

Table showing the imports into Germany from foreign countries in 1890—Continued.

Articles.	Russia.	Brazil.	Argentine Republic.	Brazil and Argentine Republic.	Norway.	Greece.
	100 *kilos.*	100 *kilos.*	100 *kilos.*	100 *kilos.*	100 *kilos.*	100 *kilos.*
Bran, rice waste, etc.	1,420,228	.....	.....	.....	.....	.....
Drugs, chemicals, and colors	.....	26,188	15,526	.....	.....	.....
Flax, hemp, and jute:						
Flax	554,590	.....	.....	.....	.....	.....
Hemp	391,796	.....	.....	.....	.....	.....
Fowl and eggs:						
Fowl	106,845	.....	.....	.....	.....	.....
Eggs	182,273	.....	.....	.....	.....	.....
Grain and agricultural products:						
Wheat	3,759,972	.....	.....	.....	.....	.....
Rye	7,511,666	.....	.....	.....	.....	.....
Oats	1,752,749	.....	.....	.....	.....	.....
Buckwheat	185,080	.....	.....	.....	.....	.....
Barley	3,665,935	.....	.....	.....	.....	.....
Indian corn	696,624	.....	.....	.....	.....	.....
Potatoes	406,649	.....	.....	.....	.....	.....
Groceries, wines, etc.:						
Wine and must in casks	.....	.....	.....	80	.....	.....
Butter and margarine	24,574	.....	.....	.....	.....	.....
Fresh slaughtered beef	90,025	.....	.....	515	.....	.....
Fish, salt, dried, etc.	.....	.....	.....	.....	3,175	.....
Tropical fruits	.....	.....	.....	76	.....	.....
Currants	.....	.....	.....	.....	.....	63,373
Pepper, black and white	.....	.....	.....	254	.....	.....
Coffee, raw	.....	527,867	.....	.....	.....	.....
Cacao beans, raw	.....	3,685	.....	.....	.....	.....
Dried fruit and berries	5,415	.....	.....	.....	.....	.....
Bakers' wares	314	.....	.....	.....	.....	.....
Tobacco:						
Leaves, unworked	.....	103,311	.....	.....	.....	.....
Leaves, entirely or half stripped	.....	250	.....	.....	.....	.....
Smoking	.....	3,566	.....	.....	.....	.....
Guano (except mineral)	.....	.....	.....	.....	44,581	.....
Hair, feathers, and bristles:						
Feathers	10,104	.....	.....	.....	.....	.....
Bristles	20,067	.....	.....	.....	.....	.....
Hair	5,049	.....	.....	.....	.....	.....
Hides and skins	59,893	141,098	101,235	.....	.....	.....
Copper wares	1,910	.....	.....	.....	.....	.....
Petroleum	435,205	.....	.....	.....	.....	.....
Mineral grease	209,227	.....	.....	.....	.....	.....
Paper and paper wares	.....	.....	.....	.....	51,477	.....
Rags	41,174	.....	.....	.....	.....	.....
Rubber and gutta-percha wares	.....	2,832	.....	.....	.....	.....
Tar, pitch, and turpentine	77,716	.....	.....	.....	.....	.....
Wood and wooden wares (building timber, etc.)	16,835,803	.....	.....	.....	.....	.....
Wool (sheep)	.....	.....	.....	285,133	.....	.....

Table showing the imports into Germany from foreign countries in 1890—Continued.

Articles.	Turkey.	Ecuador.	Haiti.	Cuba and Porto Rico.	China.	Mexico.	Peru.
	100 *kilos.*	100 *kilos.*	100 *kilos.*	100 *kilos.*	100 *kilos.*	100 *kilos.*	100 *kilos.*
Drugs, chemicals, etc. (dye-wood)	.....	.....	.....	.....	.....	187,906	.....
Groceries, wines, etc.:							
Raisins	59,582	.....	.....	.....	.....	.....	.....
Cacao beans, raw	.....	18,383	.....	.....	.....	.....	.....
Tea	.....	.....	.....	.....	9,204	.....	.....
Tobacco:							
Leaves, unworked	.....	.....	44,861	.....	.....	.....	.....
Cigars	.....	.....	.....	2,111	.....	.....	.....
Guano (except mineral)	.....	.....	.....	.....	.....	.....	112,022
Hair, feathers, and bristles (feathers)	.....	.....	.....	.....	14,659	.....	.....

Articles.	Spain.	Sweden.	German West Africa.	Portugal.	Australia.	Denmark.	Chile.
	100 *kilos.*	100 *kilos.*	100 *kilos.*	100 *kilos.*	100 *kilos.*	100 *kilos.*	100 *kilos.*
Drugs, chemicals, etc. (saltpeter)	.....	.....	.....	.....	.....	.....	3,192,193
Groceries, wines, etc.:							
Fish, salt, dried, etc	.....	.....	.....	.....	.....	4,578	.....
Tropical fruits	111,776	.....	.....	.....	.....	.....	.....
Raisins	23,887	.....	.....	.....	.....	.....	.....
Dried almonds	4,149	.....	.....	.....	.....	.....	.....
Rice	.....	.....	.....	.....	.....	60,388	.....
Iron ore	6,177,798	975,366	.....	.....	.....	.....	.....
Paper and paper wares	.....	52,238	.....	.....	.....	.....	.....
Bricks (building)	.....	.....	.....	.....	.....	265,761	.....
Rubber and gutta-percha wares	.....	.....	6,083	.....	.....	.....	.....
Wood and wooden wares:							
Raw cork	7,351	.....	.....	69,396	.....	.....	.....
Manufactures	.....	43,439	.....	.....	.....	.....	.....
Wool (sheep)	.....	.....	.....	.....	245,317	.....	.....

NOTE.—The percentages of the imports of grain from Russia are as follows: Wheat, 56 per cent.; rye, 58 per cent.; oats, 93 per cent.; buckwheat, 73 per cent.; barley, 50 per cent.; Indian corn, 12 per cent.; average, 50 per cent. Total imports of grain from Russia were 1,884,173,000 kilogrammes.

Table showing the exports from Germany to foreign countries in 1890.

Articles.	Total.	United States.		France.	Great Britain.	Austria.
		Quantity.	Per cent.			
	100 *kilos.*	100 *kilos.*		100 *kilos.*	100 *kilos.*	100 *kilos.*
Asphalt	164,288	75,156	45	.....	18,108	.....
Bran, rice waste, etc	394,531	17	.....	.....	.....	.....
Candles	9,896	170	2	.....	1,948	.....
Cement	3,972,540	1,147,001	29	.....	.....	207,500
Clothing and underclothing	70,401	5,225	7½	1,464	17,050	1,359
Coal	105,042,664	3,420	.....	11,465,673	.....	35,989,901
Cotton:						
Raw	239,090	23	.....	.....	.....	184,262
Yarn	71,468	726	1	.....	30,260	.....
Wares	281,260	62,120	22	13,332	34,900	.....

Table showing the exports from Germany to foreign countries in 1890—Continued.

Articles.	Total.	United States.		France.	Great Britain.	Austria.
		Quantity.	Per cent.			
	100 *kilos.*	100 *kilos.*		100 *kilos.*	100 *kilos.*	100 *kilos.*
Drugs, chemicals, and colors..	4,200,865	444,293	10	.....	.....	.....
Matches.....	.....	.....	30	.....	.....	.....
Ultramarine.....	.....	.....	10	.....	.....	.....
Oxalic acid.....	.....	.....	10	.....	.....	.....
Alum.....	.....	.....	20	.....	.....	.....
Precipitated sulphate of baryta.....	.....	.....	14	.....	.....	.....
Bicarbonate of soda.....	.....	.....	14	.....	.....	.....
Alizarin.....	.....	.....	15	.....	.....	.....
Ammoniac.....	.....	.....	20	.....	.....	.....
Aniline oils and salts.....	.....	.....	16	.....	.....	.....
Aniline colors.....	.....	.....	17	.....	.....	.....
Quinine.....	.....	.....	33⅓	.....	.....	.....
Muriate of potash.....	.....	.....	31	.....	.....	.....
Sulphate of potash.....	.....	.....	36	.....	.....	.....
Minium.....	.....	.....	15	.....	.....	.....
Mineral waters.....	.....	.....	10	.....	.....	.....
Zinc white.....	.....	.....	5	.....	.....	.....
Flax, hemp, and jute.....	529,109	828	.....	.....	.....	.....
Flax.....	262,553	.....	.....	98,653	.....	102,647
Hemp.....	255,531	.....	.....	40,777	106,437	.....
Jute.....	.....	.....	.....	.....	.....	1,182
Fowl and eggs.....	11,226	24	.....	.....	.....	.....
Fowl.....	2,994	.....	.....	.....	.....	.....
Eggs.....	8,232	.....	.....	1,935	2,356	.....
Fancy wares, clocks, etc.....	74,093	24,873	33	3,070	22,223	.....
Glass and glassware.....	841,401	155,338	18	.....	150,296	.....
Grain and agricultural products.....	1,615,074	8,916	0½	.....	.....	.....
Potatoes.....	905,820	.....	.....	.....	.....	.....
Fresh fruit and berries....	290,417	.....	.....	.....	204,709	.....
Groceries, wines, etc.....	13,886,358	602,853	4	.....	.....	.....
Beer.....	774,529	43,735	5½	193,176	.....	.....
Arrack, cognac, and rum in casks.....	881	2	.....	.....	.....	.....
Alcohol.....	297,978	492	.....	.....	.....	.....
Other brandies and whiskies.....	89,166	32,962	37	.....	.....	.....
Wine and must in casks..	125,357	45,352	36	11,897	.....	.....
Champagne.....	15,775	548	3	.....	8,269	.....
Wine in bottles.....	52,409	15,807	30	.....	15,462	.....
Butter and margarine.....	70,352	38	.....	.....	57,218	.....
Fresh slaughtered beef...	159,702	1,795	1	94,689	49,683	.....
Fish, salt, dried, etc.....	5,237	81	1½	.....	.....	4,090
Tropical fruits.....	127	.....	.....	.....	.....	.....
Currants.....	12	.....	.....	.....	.....	.....
Raisins.....	35	.....	.....	.....	.....	.....
Dried almonds.....	18	.....	.....	.....	.....	.....
Pepper, black and white..	43	.....	.....	.....	.....	.....
Coffee, raw.....	235	.....	.....	.....	.....	.....
Cacao beans, raw.....	22	.....	.....	.....	.....	.....
Cheese.....	14,756	79	0½	6,837	.....	.....
Chicory.....	26,515	16,420	62	.....	1,399	.....
Dried fruit and berries....	1,783	348	20	.....	.....	.....
Chocolate, etc.....	1,072	349	33	.....	.....	.....
Dextrine, etc.....	94,419	26,095	27	7,350	30,259	7,396
Potato flour and starch...	513,419	8,841	1½	28,033	244,027	.....

Table showing the exports from Germany to foreign countries in 1890—Continued.

Articles.	Total.	United States.		France.	Great Britain.	Austria.
		Quantity.	Per cent.			
Groceries, wines, etc.—Continued.	100 *kilos.*	100 *kilos.*		100 *kilos.*	100 *kilos.*	100 *kilos.*
Other starch	8,564	9	.....	922	.....	.....
Bakers' wares	15,325	127	0¾	500	586	459
Grits, etc	51,247	2,909	5½	.....	.....	.....
Flour and meal	1,161,912	297	.....	.....	261,114	.....
Rice	185	.....	.....	.....	.....	.....
Salt	1,993,964	49,582	2½	.....	.....	214,063
Molasses	205,339	.....	.....	177,217	.....	.....
Starch, sugar, maltose, etc	107,106	3,150	3	.....	89,102	.....
Sirup from sugar manufactures	6,019	118	2	.....	4,294	.....
Tobacco:						
Leaves, unworked	13,409	.....	.....	.....	.....	.....
Stems and ribs and chewing	6,512	.....	.....	.....	.....	.....
Cigars	3,468	13	0⅜	.....	321	.....
Leaves, entirely or half stripped	11,567	2	10	.....	6,227	.....
Smoking	2,579	7	.....	739	.....	.....
Tea	102	.....	.....	.....	.....	.....
Crystallized starch, fruit sugar, etc	90,051	1,208	1½	.....	77,188	.....
Sugar	7,965,167	352,674	4½	.....	4,693,734	.....
Guano (except mineral)	28,509	.....	.....	.....	.....	7,561
Hair, feathers, and bristles	31,030	4,124	13	.....	.....	.....
Feathers	7,876	.....	.....	.....	1,551	2,713
Bristles	15,329	3,313	.....	3,404	4,375	.....
Hair	7,825	638	.....	.....	1,594	2,099
Hides and skins	366,742	22,648	6	64,219	39,141	51,716
Hops	119,440	16,054	13	19,658	37,977	5,749
Leather and leather goods	123,664	12,825	10	.....	29,020	16,272
Fine leather wares	33,586	5,888	.....	.....	10,531	.....
Gloves	.....	1,927	56	.....	523	455
Linen, jute, and manilla yarn, thread, and rope	99,524	322	0⅓	.....	7,308	32,892
Rope	45,218	.....	.....	.....	.....	.....
Jute and hemp yarn	31,825	.....	.....	.....	.....	.....
Linen goods	43,808	17,143	39	.....	2,403	.....
Machines and instruments:						
Pianos, organs, etc	79,863	864	1	.....	29,306	.....
Other musical instruments	44,020	16,382	37	1,137	9,109	1,487
Locomotives and stationary engines	49,304	88	.....	.....	1,201	2,865
Sewing machines and parts thereof	77,362	560	0⅞	5,450	7,487	.....
Steam-boilers	20,917	.....	.....	.....	.....	3,592
Other machines and parts thereof	730,808	10,062	1½	67,467	25,434	122,838
Metals and metal wares:						
Iron	31,298,444	570,154	1¾	.....	.....	.....
Ore	22,081,198	500	.....	10,692,757	.....	.....
Wares	.....	.....	6	437,286	776,185	.....
Copper	176,000	2,213	1¼	.....	.....	.....
Ore	83,820	.....	.....	14,703	.....	44,284
Wares	.....	2,211	.....	.....	10,812	6,536

Table showing the exports from Germany to foreign countries in 1890—Continued.

Articles.	Total.	United States.		France.	Great Britain.	Austria.
		Quantity.	Per cent.			
Metals and metal wares—Continued.	100 *kilos.*	100 *kilos.*		100 *kilos.*	100 *kilos.*	100 *kilos.*
Lead	341,882	10,782	3	41,149	107,954	33,165
Tin	5,736	44	0⅞	.....	1,240	1,828
Zinc	737,234	9,843	1⅓	48,921	285,961	125,374
Petroleum	1,514	24	1½	.....	.....	.....
Mineral grease	3,677	7	0⅛	.....	.....	.....
Oils and fats	263,261	2,602	1	.....	102,341	55,145
Paper and paper wares	1,011,565	93,025	9	157,103	286,075	.....
Pottery, porcelain, etc	1,901,162	77,415	4	.....	.....	.....
Bricks:						
Building	1,107,339	.....	.....	153,153	.....	209,584
Fire	.....	8,908	.....	71,095	.....	37,532
Pottery	.....	14,393	.....	27,837	.....	26,864
Porcelain	.....	53,404	40	3,642	36,291	5,040
Rags	454,989	211,485	46	.....	135,412	26,861
Rubber and gutta-percha wares	8,607	2,856	33	.....	1,803	.....
Silk	11,872	5	.....	.....	.....	.....
Silk goods	57,405	24,057	42	3,341	16,197	1,198
Slate	20,335	.....	.....	.....	.....	17,248
Tar, pitch, and turpentine	184,444	1,180	0⅔	.....	.....	68,113
Wood and wooden wares	3,433,777	5,170	0⅛	604,826	529,768	.....
Manufactures	291,628	4,677	1⅓	.....	.....	.....
Wool	296,996	6,618	2¼	.....	.....	.....
Artificial	146,408	186	.....	25,433	27,540	43,359
Sheep	90,199	1,528	1⅛	10,507	.....	28,913
Woolen goods	277,887	40,516	14	11,093	41,540	.....
Yarn	60,389	4,904	8	.....	7,154	19,666
Total	173,729,266	3,692,372	2	.....	.....	.....

Articles.	Holland	Belgium.	British India.	Central America.	Switzerland.	Italy.
	100 *kilos.*	100 *kilos.*	100 *kilos.*	100 *kilos.*	100 *kilos.*	100 *kilos.*
Cement	772,616	202,115	.....	.....	131,989	.....
Clothing and underclothing	15,169	2,673	.....	.....	6,818	.....
Coal	31,754,218	8,109,657	.....	.....	6,894,013	.....
Cotton wares	16,873	9,152	.....	.....	10,450	.....
Drugs, chemicals, and colors (matches)	.....	.....	.....	850	.....	.....
Flax	.....	43,970	.....	.....	.....	.....
Fowl and eggs:						
Fowl	.....	1,137	.....	.....	.....	.....
Eggs	1,842	.....	.....	.....	.....	.....
Glass and glassware	.....	44,748	.....	.....	.....	.....
Grain and agricultural products (potatoes)	288,370	120,312	.....	.....	281,369	.....
Groceries, wines, etc.:						
Beer	.....	73,234	.....	.....	72,986	.....
Wine and must in casks	.....	.....	.....	.....	32,704	.....
Cheese	.....	.....	.....	.....	4,770	.....
Chicory	.....	.....	.....	.....	4,555	.....
Dried fruit and berries	.....	.....	.....	.....	304	.....
Potato flour and starch	.....	.....	.....	.....	.....	49,553
Other starch	.....	.....	.....	.....	1,523	1,517
Bakers' wares	.....	.....	.....	.....	505	.....

Table showing the exports from Germany to foreign countries in 1890—Continued.

Articles.	Holland.	Belgium.	British India.	Central America.	Switzerland.	Italy.
Groceries, wines, etc.—Continued.	100 *kilos.*	100 *kilos.*	100 *kilos.*	100 *kilos.*	100 *kilos.*	100 *kilos.*
Grits	.....	.....	.....	.....	7,004	.....
Flour and meal	231,633	.....	.....	.....	.....	.....
Salt	258,854	236,394	606,654	.....	.....	.....
Molasses	.....	16,393	.....	.....	.....	.....
Starch, sugar, maltose, etc	.....	.....	.....	.....	3,278	.....
Tobacco:						
Leaves, unworked	.....	.....	.....	.....	4,635	4,285
Stems and ribs and chewing	6,512	.....	.....	.....	.....	.....
Leaves entirely or half stripped	5,226	.....	.....	.....	.....	.....
Smoking	.....	1,418	.....	.....	.....	.....
Sugar	458,288	29,036	29,414	.....	71,655	.....
Guano (except mineral)	7,868	.....	.....	.....	.....	.....
Hair	.....	.....	.....	.....	1,044	.....
Hops	3,838	9,332	.....	.....	3,230	.....
Linen, jute, and manilla yarn, thread, and rope	5,421	.....	.....	.....	.....	.....
Machines and instruments:						
Pianos, organs, etc	5,001	.....	.....	.....	.....	2,042
Locomotives and stationary engines	.....	1,076	.....	.....	4,686	9,478
Sewing machines and parts thereof	3,744	4,829	.....	.....	3,537	3,466
Steam-boilers	1,641	.....	.....	.....	.....	1,235
Other machines and parts thereof	38,223	34,784	.....	.....	35,962	50,257
Metals and metal wares:						
Iron—						
Ore	.....	10,961,823	.....	.....	.....	.....
Wares	903,401	1,018,907	.....	.....	.....	505,527
Copper—						
Ore	3,148	6,129	.....	.....	.....	.....
Wares	6,544	.....	.....	.....	7,587	7,093
Lead	26,547	49,946	.....	.....	.....	.....
Zinc	79,945	.....	.....	.....	.....	29,381
Paper and paper wares	96,513	.....	.....	.....	.....	.....
Pottery, porcelain, etc.:						
Bricks—						
Building	.....	.....	.....	.....	101,836	.....
Fire	21,380	41,537	.....	.....	33,969	.....
Pottery	43,302	.....	.....	.....	.....	.....
Porcelain	5,026	.....	.....	.....	.....	.....
Silk goods	2,266	.....	.....	.....	.....	.....
Wood and wooden wares	761,625	480,449	.....	.....	.....	.....
Wool:						
Artificial	.....	23,384	.....	.....	.....	.....
Sheep	.....	9,527	.....	.....	.....	.....
Woolen goods	17,523	.....	9,556	.....	19,339	11,104

Table showing the exports from Germany to foreign countries in 1890—Continued.

Articles.	Russia.	Brazil.	Argentine Republic.	Brazil and Argentine Republic.	Norway.	Spain.
	100 *kilos.*	100 *kilos.*	100 *kilos.*	100 *kilos.*	100 *kilos.*	100 *kilos.*
Asphalt	26,594					
Cement	103,970					
Clothing and underclothing		2,560	757			
Coal	2,495,377					
Cotton wares		24,516	8,936			
Drugs, chemicals, and colors		20,019	69,034			
Fancy wares, clocks, etc		870	530			
Glass and glassware		11,257	13,983			
Groceries, wines, etc:						
Beer		35,969	11,953			
Alcohol						199,149
Other brandies and whiskies	2,072	2,100	371			2,311
Wine and must in casks				1,086		
Champagne and wine in bottles				744		
Chicory				314		
Potato flour and starch						79,807
Grits, etc					6,939	
Flour and meal					240,631	
Starch, sugar, maltose, etc		3,074				
Sugar	73,161			2,570	43,484	
Hops	7,288			1,577		
Jute	8,082					
Linen, jute, and manilla yarn, thread, and rope				5,873		
Machines and instruments:						
Pianos, organs, etc	2,683			2,641		
Other musical instruments	1,657			2,654		
Locomotives and stationary engines	2,168			909		3,171
Sewing machines and parts thereof	7,651			6,938		
Steam-boilers	2,261			936		1,985
Other machines and parts thereof	114,419			17,130		22,349
Metals and metal wares:						
Iron wares	893,742			399,808		
Copper—						
Ore	10,639					
Wares	9,080			2,714	4,517	
Lead	49,578					
Zinc	45,837					
Paper and paper wares				39,255		
Pottery, porcelain, etc.:						
Bricks (fire)	86,167			7,926		15,243
Pottery	16,535			23,496		
Porcelain				2,286		
Rubber and gutta-percha wares	1,666					
Silk	4,415					
Tar, pitch, and turpentine	30,134					
Wool (sheep)	9,586					
Woolen goods				12,776		
Yarn	9,026					

Table showing the exports from Germany to foreign countries in 1890—Continued.

Articles.	Sweden.	German West Africa.	Australia.	Denmark.	Cape Colony and Orange Free State.	Roumania.
	100 *kilos.*	100 *kilos.*	100 *kilos.*	100 *kilos.*	100 *kilos.*	100 *kilos.*
Asphalt	20,395					
Bran, rice waste, etc.	82,573			251,621		
Bricks:						
Building				117,942		
Fire				15,194		
Candles	620				1,193	
Cement				175,589		256,609
Clothing and underclothing				293		
Copper wares	4,925					
Cotton wares						8,293
Feathers	1,269					
Groceries, wines, etc.:						
Arrack, cognac, and rum in casks		698				
Other brandies and whiskies		11,360				
Chicory				1,088		
Potato flour and starch				32,640		
Grits, etc.				16,068		
Flour and meal	141,121					
Cigars			681			
Sugar	225,312			31,987		47,127
Hops	5,255			4,306		
Jute	1,786					
Linen goods				3,803		
Machines and instruments:						
Locomotives and stationary engines				973		11,121
Sewing machines and parts thereof	5,748		3,832			
Steam-boilers	969					
Other machines and parts thereof	51,346					
Woolen goods	14,561			12,163		
Yarn	3,273					

NOTE.—The exports of sulphur to Chile were 157,600 kilogrammes and to Mexico 565 kilogrammes.

EXPORTS TO, AND IMPORTS FROM, THE UNITED STATES.

The foregoing table shows clearly that Germany's chief importations from the United States are raw materials, while its chief exportations to the United States are manufactured wares.

The declared value of all wares shipped from Germany to the United States during the calendar year 1890 and covered by invoices legalized at the various consulates of the United States in Germany was:

Consulates-general.	Amount.	Increase.
Berlin	$58,808,080.45	$6,892,094.06
Frankfort	43,133,636.59	5,971,247.05
Total	101,941,717.04	12,863,341.11

The increase in 1890 over 1889 was 14.4 per cent.

Table showing the chief importations from the United States in 1890.

Articles.	Amount.	Percentage of total.
	100 kilos.	*Per cent.*
Raw cotton	1,251,447	50
Grain	4,456,402	11
Indian corn	3,665,979	65
Beef	55,838	23
Tobacco:		
Leaves	102,651	23
Stems	30,425	97
Sewing machines	8,959	30
Lard	755,739	83
Petroleum	5,489,887	85
Mineral grease	144,778	28
Turpentine	506,377	70

Table showing the chief exportations to the United States in 1890.

Articles.	Amount.	Percentage of total.
Manufactures:	*100 kilos.*	*Per cent.*
Cotton	62,120	22
Hosiery	50,013	60
Linen	17,143	39
Silk	24,057	42
Wool	40,516	14
Porcelain	53,404	40
Glass	155,338	18
Rubber	2,856	33
Rags	211,485	46
Musical instruments	16,382	37
Chemicals and colors	444,293	10
Fancy wares	24,873	33
Liquors	32,962	37
Wine:		
In casks	45,352	36
In bottles	15,807	30
Dextrine	26,095	27
Leather gloves	1,927	57

As German duties are collected upon the weight of the imported articles, it is not possible to obtain any statistics from German official sources in regard to the value of the wares imported into Germany from the United States.

GEO. H. MURPHY,
Consular Clerk.

UNITED STATES CONSULATE-GENERAL,
Berlin, June, 1891.

American trade in Florence.—The two last lines in paragraph 4 of Consul Diller's report on "American Trade in Florence" (page 136 of CONSULAR REPORTS for May, 1891, No. 128) should read as follows: "and marble—sailing vessels returning to Italy could readily ballast with both kinds of coal, which would always find a ready sale in this market—and make a fair profit."

THE BELGIAN MINERS' STRIKE.

REPORT BY CONSUL DANFORTH, OF LIEGE.

The May, 1891, strike of miners has come and gone. It was like a prairie fire—swift, sweeping, and superficial. The area of the strike covered the coal deposits of south and southeastern Belgium and of north and northwestern France. In the coal basin of Charleroi there were 26,000 miners on strike; in the basin of Liege, 20,000 miners; and in France, perhaps 50,000 miners; making a total of between 90,000 and 100,000 men on strike during the same period of time.

The immediate occasion of the strike was without local cause or origin. Paris must be sought for it. At the general convention of miners held at that city in April the question of a general strike among all miners of Europe for a day of 8 hours of labor was introduced and debated. The Latin race was for immediate action; the German and English (including Scotch and Welsh) declared for delay and ampler preparation.

Though the general strike in convention was outdebated and outvoted, yet the cause of the Belgian miners was represented by their delegates as being so pressing as to require immediate action. A reluctant consent was obtained, and some indefinite promise of pecuniary support was assured.

But the public in Belgium and many of the mine-owners did not anticipate a strike. May-day agitation, with many threats and much vaporing, had resulted in nothing more serious than meetings and parades heretofore. It was supposed that such would be the outcome the present year. The strike was scarcely less of a surprise to many of the miners than to the public at large. There was no special grievance to be righted, no peculiar wrong to excite indignation and revolt existing this year that had not existed other years. Indeed, to both mines and miners the year has been one of activity and prosperity. The stock of the mines rules high in the market, and work has been abundant and wages as usual to miners. An indication of how little the heart of the miners was in the strike may be gained from the method employed by which to inaugurate the strike. We are informed that—

> At Charleroi the men were gathered together by their leaders. All who were opposed to the strike were asked to hold up their hands and their names would be recorded. Naturally, this species of hand-showing was not indulged in, whereupon the vote was immediately pronounced as unanimously in favor of the strike.

The slight resistance and short duration of the strike is another indication of its unpopularity among the miners. While its effects still linger, the strike itself was in force but a week or 10 days. As soon as the authorities provided means for the protection of miners wishing to work they returned by scores and hundreds to the mines. There never existed a determined purpose to win or suffer. No special enmity was shown; no destructive spirit to a marked extent was exhibited. Before the police and military obtained the upper hand tickets or passports were issued by the strike leaders to a

limited number of men, whose duty it was to keep the pumps moving and to take care of the horses in the mines. The strikers were not blindly attempting the destruction or serious injury of the mines. They wished, if easily possible, to compel shorter hours of labor at the existing rate of wages.

Without doubt the leaders and agitators, some of whom came from Germany to foment the movement, wished to extend the strike to other industries, such as iron and glass. Their success was small. It became known that a violent delegation of workmen were about descending upon some iron works to drive the mechanics off, when a peculiar and effective means of repelling the attack was adopted. Iron rods and tongs and pinchers were heated to a white heat. These were arguments, the close, personal application of which the malcontents did not care to try, but suddenly decamped, not to return. During the whole strike about one hundred and forty arrests were made in this consular district of those who attempted to interfere with workers.

Mine-owners claim that they receive but 7½ hours of actual productive labor from the miners. Miners claim that through delays, obstructions, etc., 10 hours of their time are absorbed by the companies.

Reports of violence sent to the United States have been greatly exaggerated. I have moved in the midst of the scenes, have read and been conversant with both sides, and can say that we should regard the whole matter as a tame affair in our somewhat intense country. The dynamite explosion in Liege was the revenge of a discharged workman taking advantage of the strike disturbances to conceal his diabolical deed. Happily a smashed door and broken glass cover the damage done.

The significance of the strike—so great in numbers, so small in tangible results—is not to be sought upon its economic side. It was not intended to be, nor was it, entered upon by the miners (a few leaders excepted) as a war upon capital. They did not mean business; they did not determine upon a fight. As such it was a huge bubble, easily blown about and quickly pricked.

The strike was a significant and important social and political demonstration. Into this men and women entered earnestly and heartily by swelling enthusiastic thousands. It would be a great mistake for the student of politico-sociology to overlook or to underestimate the meaning of those demonstrating tens of thousands who by banners and shouts and songs demand "universal suffrage," "8 hours of work, 8 hours of recreation, and 8 hours of rest." The "fourth estate" is in deep unrest. It has become sensitive and feels its cramping limitations. Intelligence is increasing and with it the desire and demand for easier conditions of life. The force of numbers in combination and under direction for the accomplishment of results it is fast learning. It is also learning the heretofore unlearned force of self-repression and of movement within orderly bounds. The violent were the few scores; the orderly were the many thousands. A "straw" to show in which way the wind blows is mentioned; it is a small thing in itself. As a "well-dressed" man in moving about meets the miners of 50 or 60 years

of age universally he receives a pleasant greeting, and caps are touched; but when he meets the younger men they take no notice of him.

Many among the "fourth estate" bear a sullen heart, and all are resolved upon such betterment as they can achieve. The May demonstration of this year indicates the deepening interest that is reaching the increasing numbers.

It is estimated that 100,000 men of all trades were on strike throughout Belgium. At this date (May 21) the committee of the general council of the National Federation of Workingmen declare the strike closed, as the promise is given by the legislative chambers of a favorable consideration of the demand for universal suffrage. This demonstrates the essential political character of the manifestation.

JAMES R. DANFORTH,

UNITED STATES CONSULATE, *Consul.*

Liege, May 21, 1891.

SPONGE TRADE OF THE BAHAMAS.

REPORT BY CONSUL McLAIN, OF NASSAU.

In response to the direction of the Department made on May 4, 1891, at the request of certain American shippers and traders for further information on the sponge industry of the Bahamas, which has been the subject of previous reports, I beg to submit the following, which will cover all the questions submitted:

The vessels used in the sponge trade in these islands are small craft, varying in size from 5 to 25 tons burden, and are either schooner or sloop rigged. They are all built in local shipyards, and their construction and repairs constitute an important business in itself. The frames are generally made of Madeira wood, a hard, tough wood of native growth, the planking and other material being of yellow pine imported from our Southern States. They have a small cabin for sleeping purposes. Cooking is done on deck, the fire being built on the earth bottom of a wooden box, and each vessel carries two or three small open row or scull boats, with a crew of from 8 to 12 men. These vessels have an average life of from 16 to 20 years, undergoing, of course, occasional repairs. It is thought that there are from 450 to 500 of these vessels engaged in the business of gathering sponges in these waters.

The number of persons engaged in the business of gathering sponges in the Bahamas, handling them and preparing them in various stages for market is from 5,000 to 6,000, all of whom, except the shipowners, brokers, and shippers, are black or colored people. Hands employed in clipping, washing, packing, and preparing finally for shipment abroad get from 50 to 75 cents per day of 10 hours. The amount earned by the men who go fishing for sponges can not be given, as their pay depends entirely on the number of sponges obtained. The owner of the vessel fits her out at his own expense, and the profits of the voyage are divided up in shares among the owner, the

master, and the men. They are never hired by the month, nor do they ever get specified wages. The most that can be said is that the men make a tolerable living, and I should say that the sponge fisherman who earns over $300 a year is the exception. The owners of the vessels, as a rule, have their own shops, from which the vessels are fitted out, and on supplies thus furnished the owner makes a profit in addition to others. The shipowners, generally speaking, find considerable profit in the business, whilst the fishermen, if not able to lay up any money from the pursuit, are yet enabled to rely upon it for a moderate living. The method of gathering sponges here is by means of iron hooks attached to long poles. By using a water glass the fisherman can readily discover the sponges at the bottom, and then with his pole and hook he will bring up those he may select as fit for his purpose, leaving the smaller ones untouched. Some sponges adhere firmly to the bed of the sea, whilst others are not attached at all, these latter being known as "rollers." About 10 years ago an attempt was made to introduce dredges; but it was found that their use was likely to ruin the beds, because in passing over the bottom they dislodged and brought up not only the good sponges, but the young and unsalable ones as well, killing the spawn and working great mischief. The ordinary fishermen also made an outcry, declaring that the use of dredges interfered with their rights. An act was passed by the legislature forbidding the use of dredges, and only the pole and hook are now ever used. When the sponge field is reached the vessel anchors, and the men, putting off in the small open boats, do the fishing in the manner above indicated, returning to the vessel before nightfall with their catch.

The sponges, when brought to the vessel, are at once spread upon the deck and are left exposed to the sun for several days, during which time the animal matter that covers the sponge gradually dies. This is a black, gelatinous substance of a very low order of marine life, which during the process of decay emits a most objectionable odor. The vessels visit what is called the "kraal" once a week to land the load from the deck. The kraal is an inclosed pen, fenced in by sticks of wood so as to allow a free circulation of water through it, usually built in a sheltered and shallow bay or cove, on one of the cays near by. The sponges are placed in the kraal and left to be soaked and washed by the action of the water from 4 to 6 days, when they are taken out and beaten with sticks until the decayed covering is entirely removed. Having been subjected to this course of exposure, soaking, beating, and washing, the sponges are quite clean and are taken on board the vessel, packed away in the hold, conveyed to Nassau, and in this condition are sold in the local market.

The average catch per trip can not be stated, as the cargoes vary greatly in size and value. Of the larger sponges a catch of 5,000, or of the smaller ones 7,500, would be considered a fair lot. Occasionally a cargo of from 12,000 to 15,000 large sponges has been brought in, but this success is exceptional. The vessels are provisioned and fitted out, as a rule, for a voyage of about 6 weeks, and generally from seven to eight voyages are made per annum.

There can not be said to be any season for sponge-gathering, as it goes on all through the year. A number of vessels are often laid up, however, during August and September, the men being timid and afraid of hurricanes during that period. Of course, the quieter the weather and smoother the sea the better the chances are for making a good catch, as nearly all the work is done in small, open boats from 10 to 12 feet in length. Much also depends upon the energy and the industry of the crew, and there is luck in finding a locality where the sponges are valuable and abundant. As to the length of time required for sponges to grow to good marketable size, little definite can be said; none of the fishermen are able to tell, though many volunteer opinions that differ widely. It is a matter to be determined by future scientific investigation, but I believe it will be found that a healthy sponge will reach a marketable size in from 12 to 18 months under ordinary conditions of growth. No attempts have been made, worthy of mention, to cultivate the sponge in these waters.

The principal varieties of sponges gathered in the Bahamas—with sundry grades in each variety—are as follows, viz, boat, grass, glove, hardhead, reef (white and dark), velvet (abaco and cay), sheeps' wool, and yellow, of which the most valuable is sheeps' wool. The quantity of each kind exported in 1890 was as follows: Boat, 8,779 pounds; grass, 320,520 pounds; glove, 4,595 pounds; hardhead, 16,027 pounds; reef, 81,128 pounds; velvet, 236,596 pounds; wool, 131,038 pounds; yellow, 69,197 pounds; and of refuse and clippings, say, 50,000 pounds. The total export reached over 900,000 pounds, which was valued in invoices at $306,896.

The average prices for which sponges sell in the local market are roughly estimated as follows: Sheeps' wool (best), say $1.15 per pound; velvet, 75 cents; reef, 65 cents; glove, 25 cents; hardhead, 40 cents; grass, 35 cents; yellow, 30 cents. These are prices paid when landed from vessels, before any expenses are incurred for preparing for export.

The crop of 1890, it is only fair to say, was above the average, being really the most valuable one in many years. The quantity shipped to the United States in 1890 was 708,000 pounds, worth $236,000; to Great Britain, 107,000 pounds, worth $40,000; to France, 50,000 pounds, worth $16,000; to Holland and Germany, 50,000 pounds, worth $15,000.

Bahama sponges are not considered very good, but a ready market is found for all that can be obtained and at constantly improving prices. There are no indications of any failure of the supply.

The sponges are prepared for export in the following manner: After being bought in the local market they are carted to the shipping yard of the purchaser, where they are cut and trimmed into proper shapes and sizes; they are then washed and thoroughly dried, being generally spread in the sun for that purpose upon canvas or old sails; next they are assorted according to varieties and grades, and then packed by means of hand presses into bales weighing from 20 to 150 pounds. Sometimes the sponges are bleached by being passed through a solution of white lime and water, so

weak as not to injure the fiber of the sponge. I do not know of any process resorted to for coloring the sponges, and few, indeed, are even bleached at present.

When offered for sale in the local market, the sponges are either piled up loose or made into strands or beads of from two to ten sponges each. Abaco wool and velvet, the best sponges we have, are usually made into strings of from eight to ten sponges each, the price averaging about 60 cents per string. Other wool and velvet are generally sold in lots not strung. The buyer, however, is not guided in his purchase by the number of sponges on a string, but by what a certain lot will weigh, and the weight is never given, but the buyer must estimate it. Hence practical experience is needed in the purchasing of the sponges.

Sponges are offered for sale on 5 days of the week at the sponge exchange. They are landed from the vessels, and each cargo is piled up by itself. The weight is entirely unknown. The buyers examine the lots and each man hands in a private tender, in writing, for the lot, and it is awarded, on opening the tenders, to the highest bidder. A successful buyer must be able to judge correctly by his eye and experience just how many pounds of good sponges he will be able to get out of a given lot when it has been carefully worked up.

Nearly all the sponges sold here are bought by resident agents, who buy for New York, London, and Paris houses, shipping the goods to their principals. A few merchants handle sponges on their own account.

The principal buyers of sponges in this market are Messrs. George B. Adderley, J. B. Brown, Edward Y. Webb, Johnson & Bro., R. H. Sawyer & Co., George W. Higgs, Young & Higgs, Saunders & Co., William R. Pyfrom, Henry W. Lightbourn, and E. S. Hall.

The question whether it would be a violation of the laws of the United States to import sponge fishermen into Florida to introduce the business on the west coast of that State is superfluous, because there is no necessity for making any arrangement of the kind with the sponge-gatherers of the Bahamas. The person submitting the question can not be well informed upon the industries of his own State, for the sponge business is in a flourishing condition, and has been for years, along the southern coast of Florida, with its headquarters at Key West, and hundreds of the people of that vicinity are engaged all the time in gathering, curing, and shipping sponges. Many natives of this colony visit Florida from time to time and find employment in the sponge business. All the crews necessary to introduce the business in the vicinity of Tampa and men well versed in the details of the industry can be obtained easily at Key West without the least necessity of importing contract labor into the State from the Bahamas. I am informed that the sponges growing along the Florida coast are much superior to the sponges of the Bahamas. I believe the foregoing covers all the information asked for.

THOS. J. McLAIN,

UNITED STATES CONSULATE, *Consul.*

Nassau, N. P., May 30, 1891.

DANISH BUTTER TRADE.

REPORT BY CONSUL RYDER, OF COPENHAGEN.

Whilst the year 1890 brought so very marked an improvement in almost every branch of agriculture as compared with many of the previous years, it would, unfortunately, appear not to have reached the Kingdom's staple product of butter, at least so far as prices are concerned. While in 1889 the average price of best export butter was $25.72 per cwt., in the past year it was only $24.70 per cwt. It is true that these average prices do not always give a fully reliable standard of the yield of the butter production, for the reason that the one year can have relatively high prices during the summer months and relatively low prices during the winter months, and in that way attain the same average price as a year in which the very reverse had been the case. But, in spite of such averages, the year 1889 brought the largest income to the Danish dairies.

In 1890 exceptionally low butter prices ruled during the whole time, when the production of butter was at the highest point, viz, in the summer months, and the country's income from butter will probably be even less than even the low average figures justify. Against this unfavorable result the early and good grazing throughout the year will have been some set off.

The average price for the past year was the same as for 1888, but otherwise it will be necessary to go back some 20 years to meet with an equally low average. The cause of this sad result can scarcely be attributed either to any decline in Danish butter in the English markets or to any decline in the purchasing of the English customers, or even to any falling off in the quality of the butter. The cause may, perhaps, be more justly laid to the objectionable course pursued of late in this export trade, namely, in the increase of the consignment business and the decline in the free-on-board sales. The price movements for finest export butter in the course of the past year have been great, the minimum price having been $18.90 per cwt. in the month of July and the maximum price $29.70 per cwt. in the month of November.

The mean prices of best export butter per cwt. for each month in the past year were as follows:

Month.	Price.	Month.	Price.
January	$26.10	July	$20.00
February	26.20	August	22.30
March	26.00	September	25.25
April	24.70	October	26.80
May	22.30	November	28.70
June	20.15	December	27.90

During the summer months the average price was only $20.80 per cwt., that is to say, a lower average than has been known for a long series of years.

In the movements from week to week and from month to month it will be sufficient to draw attention to the sudden fall in prices of $4.55 per cwt. which took place in July and the sudden rise which occurred in November of $5.10 per cwt. Of the second and medium grades of butter by far the largest part is used for home consumption, and during the 8 months in which this description of butter was officially noted, the lowest price was $13.40 per cwt. and the highest $17.10 per cwt.

In the last 10 years the average prices for finest export butter per cwt. have been as follows:

Year.	Price.	Year.	Price.
1881	$32.40	1886	$25.63
1882	32.00	1887	25.52
1883	30.24	1888	24.70
1884	29.42	1889	25.72
1885	27.13	1890	24.70

HENRY B. RYDER,

UNITED STATES CONSULATE, *Consul.*

Copenhagen, March 24, 1891.

FOREIGN COMMERCE OF RUSSIA IN 1890.

REPORT BY CONSUL-GENERAL CRAWFORD, OF ST. PETERSBURG.

The customs administration has just published a statement showing the movement of commerce of Russia in 1890 on the European frontier and on the Caucasian coast of the Black Sea, from which I have made a brief summary for the use of the Department.

Compared with the previous year, the customs receipts in 1890 show, on a total of $71,441,500, a surplus of about $2,400,000. The receipts have increased about $204,000 in colonial products and $2,368,000 on tea, hides, wax, cast-iron in bars, iron, and other articles.

The total receipts for the last 8 years were as follows:

Year.	Amount.	Year.	Amount.
1890	$71,441,500	1886	$54,198,000
1889	69,047,500	1885	49,249,000
1888	64,122,000	1884	49,772,500
1887	54,725,000	1883	50,965,500

The exports in 1890 amounted to $343,510,000, including goods exported from the Caucasus by the Black Sea, and, compared with those of last year, they show a decrease of $37,500,000, or 8½ per cent.

It must be remarked that the exports in 1889 were less than those of 1888 by $20,500,000. Thus in the space of 2 years the Russian export trade has decreased by $53,000,000. The decrease is principally on cereals, of which

7,502,382 tons were exported, valued at $169,256,000, as against 8,378,640 tons, valued at $187,700,000, in 1889.

The following table shows the amount of different cereals exported in 1890, as compared with the exports in 1889:

Cereals.	1889.	1890.
	Tons.	*Tons.*
Wheat	3,429,720	3,275,082
Rye	1,515,600	1,384,200
Barley	1,183,500	1,091,880
Oats	1,262,340	933,840
Maize	484,020	370,980
Peas	79,740	68,040
Meal	26,460	30,240
Flour	126,180	100,440
Other	271,080	247,680
Total	8,378,640	7,502,382

Table showing the principal exports from Russia in 1889 and 1890.

Articles.	Quantity.		Value.	
	1890.	1889.	1890.	1889.
Eggs...number	755,000,000	609,000,000	$6,180,000	$4,985,000
Caviar...tons	3,600	4,374	1,265,000	1,445,000
Fish...do	9,486	9,666	1,995,000	1,700,000
Refined sugar...do	30,186	63,684	3,450,000	6,900,000
Tobacco...do	3,600	5,094	800,000	700,000
Alcohol...degrees	426,000,000	402,000,000	2,870,000	2,880,000
Forest products...tons	966,600	1,002,600	26,850,000	27,850,000
Linseed...do	436,680	431,820	15,200,000	16,300,000
Hemp seed...do	16,380	31,500	470,000	990,000
Oleaginous grains...do	128,340	78,660	4,925,000	2,115,000
Other grains...do	6,840	4,680	755,000	515,000
Grain residue...do	118,800	154,800	2,950,000	3,150,000
Flax...do	218,340	201,960	28,610,000	28,990,000
Tow...do	21,060	22,500	1,890,000	2,205,000
Hemp...do	59,400	78,260	8,155,000	10,365,000
Tow...do	9,000	6,940	720,000	495,000
Hides...do	6,642	6,146	2,450,000	2,925,000
Leather...do	9,000	6,822	3,090,000	2,825,000
Bones...do	41,940	38,970	2,020,000	910,000
Horsehair...do	1,755	2,300	460,000	710,000
Bristles...do	2,808	3,042	4,547,000	5,509,000
Birds' feathers...do	2,070	2,016	800,000	786,000
Tallow...do	4,212	4,176	800,000	900,000
Wool:				
Common...do	22,860	25,380	5,650,000	6,200,000
Merino...do	6,480	11,790	1,575,000	4,785,000
Camels' hair...do	1,314	6,030	289,500	1,310,500
Platinum...pounds	7,200	10,800	558,000	680,000
Poultry and game...number	5,766,000	6,635,000	2,260,000	2,495,000
Cattle...do	13,000	15,000	515,000	610,000
Pigs...do	6,000	34,000	120,000	688,000
Sheep...do	108,000	136,000	319,000	403,500
Horses...do	43,400	37,300	2,088,500	2,202,000
Rope			43,500	500,000

The export of manganese ore amounted to 58,266 tons, valued at $686,500, as against 148,230 tons, valued at $1,663,500, in 1889.

It is noticed that the export of manufactured articles has fallen from $14,000,000 to $11,000,000.

The imports of Russia, which amounted to $165,280,000 in 1888 and to $185,781,000 in 1889, fell last year to $178,505,500. Foremost among the imports into Russia are tea and cotton, as shown by the following table:

Year.	Tea.	Cotton.
1888	$16,136,000	$34,124,000
1889	15,577,500	41,754,500
1890	15,393,000	39,560,500

Table showing the other principal articles of import into Russia in 1889 and 1890.

Articles.	Value.	
	1890.	1889.
Drinks (wine, beer, etc.)	$4,400,000	$4,750,000
Salted herrings	3,800,000	4,000,000
Coffee	3,000,000	2,600,000
Fruit and berries	190,000	100,000
Tobacco	1,320,000	1,303,500
Pepper	509,000	495,000
Nuts and walnuts	400,000	435,000
Wool	10,340,000	10,470,000
Colors and coloring matter	7,265,000	7,830,000
Coal and coke	6,200,000	7,060,000
Silk	4,325,000	5,235,000
Cotton nets	4,300,000	4,915,000
Olive oil	2,600,000	3,050,000
Iron	3,100,000	2,900,000
Various plants	185,000	170,000
Hides and leather	5,520,000	5,325,000
Forest products	1,625,000	1,610,000
Sheet-iron	1,930,000	1,950,000
Cast-iron in bars, etc	2,420,000	1,970,000
Gum, caoutchouc, etc	1,990,000	1,800,000
Chemical products	6,035,000	6,275,000
Lead	255,000	290,000
Steel	1,150,000	1,140,000
Caustic sodium	1,075,000	910,000
Hops	530,000	625,000
Various machinery	10,275,000	11,220,000
Steel and iron articles	5,380,000	5,825,000
Cotton stuffs	955,000	1,065,000
Clock work	1,825,000	1,730,000
Woolen stuffs	1,160,000	1,635,000
Paper articles	655,000	660,000
Glassware	795,000	870,000
Linen goods	650,000	840,000
Silks	830,000	930,000
Printed matter	1,030,000	1,080,000
Articles of joinery	530,000	505,000
Musical instruments	505,000	495,000
Linen and ready-made clothes	285,000	320,000

The movement of navigation in the ports of Russia in Europe can be résuméd as follows:

Table showing the movement of through-transit vessels.

Year.	Entered.		Cleared.	
	Number.	Tons.	Number.	Tons.
1890	9,594	3,033,074	9,450	3,005,018
1889	10,628	3,250,309	10,570	3,271,768
1888	12,047	3,615,311	11,906	3,593,150
1887	10,776	3,050,058	10,624	2,998,746
1886	8,965	2,412,422	8,885	2,406,311

Vessels under the national flag figure in the above table (1890) for 251,676 tons entered and 227,401 tons cleared.

Navigation from the different ports in 1890 is classed as follows:

ENTERED.

Ports.	Vessels under foreign flag.		Vessels under Russian flag.		Total.	
	Number.	Tons.	Number.	Tons.	Number.	Tons.
White Sea	296	72,244	300	10,779	596	83,023
Baltic Sea	4,998	1,291,342	642	106,174	5,640	1,397,516
Azof and Black Sea	3,039	1,417,812	319	134,723	3,358	1,552,535
Total	8,333	2,781,398	1,261	251,676	9,594	3,033,074
Total in 1889	9,266	2,997,299	1,362	253,010	10,628	3,250,309
Total in 1888	10,606	3,355,765	1,441	256,546	12,047	3,615,311
Total in 1887	9,392	2,796,509	1,384	253,549	10,776	3,050,058
Total in 1886	7,652	2,169,269	1,313	243,153	8,965	2,412,422

CLEARED.

White Sea	296	72,021	286	10,370	582	82,391
Baltic Sea	4,998	1,295,269	576	90,699	5,574	1,385,968
Azof and Black Sea	3,020	1,410,327	274	126,332	3,294	1,536,659
Total	8,314	2,777,617	1,136	227,401	9,450	3,005,018
Total in 1889	9,350	3,038,198	1,220	233,570	10,570	3,271,768
Total in 1888	10,606	3,358,404	1,300	234,746	11,906	3,593,150
Total in 1887	9,302	2,756,704	1,322	242,042	10,624	2,998,746
Total in 1886	7,646	2,171,526	1,239	234,785	8,885	2,406,311

The above data are from the official figures furnished by the custom-house authorities, and I have reason to look upon them as reliable.

J. M. CRAWFORD,
Consul-General.

UNITED STATES CONSULATE-GENERAL,
St. Petersburg, May 15, 1891.

CANADIAN CANAL TOLLS.

REPORT BY CONSUL-GENERAL LAY, OF OTTAWA.

DISCRIMINATION AGAINST TRANSSHIPMENTS AT AMERICAN PORTS.

In compliance with the Department's instructions of April 8, 1891, and May 14, 1891, in reference to the complaints of Ogdensburg and Oswego shippers that the order in council of March 25, 1891, discriminates against transshipments at American ports, excluding them from participating in the refund of tolls allowed on grains passing through the Welland and St. Lawrence canals to Montreal and points east of that city, I have to report as follows:

I addressed a letter of inquiry to the chief of the canal department (copy of letter marked inclosure 1), and received reply (copy of letter marked inclosure 2) referring me to the order in council of March 25, 1891 (copies inclosed). I was advised by one of the officials of the department to wait a while before making my report, as the subject of tolls was then still before the council, and the annual report was expected to be out very soon. I send by mail, under separate cover, two copies of the report, which is just out.

I also inclose copy of my letter of May 19, 1891 (marked inclosure 3), to Sir John Macdonald, minister of railways and canals, asking an interpretation of the order in council of March 25, 1891, and whether it excluded American ports from the benefit of the refund on transshipment at such ports. Having received no reply to this letter as yet, I have determined not to delay my report any longer.

It will be seen that the canal tolls are fixed at 20 cents per ton, allowing a rebate of 18 cents per ton on transshipments at Canadian ports only. There can be no doubt as to the effect of this order, whatever the intention may have been.

The large size of the boats from the upper lakes and the small locks of the canal and shallow water below Ogdensburg necessitate the transshipment of nearly all grain destined for the seaboard by way of the lakes and River St. Lawrence.

The superior facilities for landing grain at Oswego and Ogdensburg, the rapidity of its transportation by canal and rail to Montreal and New York, with nominal freight rates at the latter port, were, no doubt, the causes which led to the discrimination in favor of the Canadian route.

I am informed by the consul at Kingston, Ontario, that the transshipment of grain there is the largest business done, and that last year about one-seventh of the business was directed to Ogdensburg, American railroads, in a measure, taking the place of the Canadian canals.

There is no doubt now that grain transshipped at an American port will cost 18 cents per ton canal tolls more than if transshipped at a Canadian port.

I have extracted from the report of railways and canals for 1891 some statistics pertaining to the subject, and attach them hereto.

RICHARD G. LAY,
Consul-General.

UNITED STATES CONSULATE-GENERAL,
Ottawa, May 28, 1891.

CONSUL-GENERAL LAY TO HON. M. BOWELL, MINISTER OF CUSTOMS.

[Inclosure 1 in Consul-General Lay's report.]

CONSULATE-GENERAL OF THE UNITED STATES,
Ottawa, April 14, 1891.

DEAR SIR: I have the honor to request to be informed if the rebate on grain freight passing through the Welland and St. Lawrence canals, authorized by order in council passed March 25, 1891, will be allowed on transshipments at United States ports as at Canadian ports.

I am, etc.,

RICHARD G. LAY,
Consul-General.

THE SECRETARY OF RAILWAYS AND CANALS TO CONSUL-GENERAL LAY.

[Inclosure 2 in Consul-General Lay's report.]

DEPARTMENT OF RAILWAYS AND CANALS,
Ottawa, April 21, 1891.

SIR: In acknowledging your letter of the 14th instant, transferred from the department of customs, relating to rebate on grain freight passing through the Welland and St. Lawrence canals authorized by order in council dated March 25, 1891, and asking whether it be allowed on transshipments at United States ports as at Canadian ports, I am, in reply thereto, directed to forward you the accompanying copy of the said order in council above referred to.

I have, etc.,

A. P. BRADLEY.
Secretary.

ORDER IN COUNCIL.

GOVERNMENT HOUSE,
Ottawa, Wednesday, March 25, 1891.

Present, His Excellency the Governor-General in council.

His Excellency, having had under consideration the tariff of tolls on the canals of the Dominion and the several orders in council under which a special rate has, from time to time, been established temporarily on certain food products passing through the Welland Canal and through the St. Lawrence canals for shipment at Montreal and ports east of Montreal, is pleased to order, in virtue of the powers vested in him by chapter 37 of the revised statutes, intituled "An act respecting the department of railways and canals," and by and with the advice of the Queen's privy council for Canada, that the following amendments shall be, and the same are hereby, made to the tariff of tolls in force on the said canals, viz:

A refund shall be made on the tolls collected on wheat, Indian corn, peas, barley, rye, and (if for export) oats which may be carried through the Welland Canal and the St. Lawrence canals to Montreal or any port east of Montreal.

The refund shall be such as to reduce the tolls to 2 cents per ton of the said products or any of them, and the conditions of such refund shall be the following:

(1) The products aforesaid, on which the refund may be claimed, shall be shown to have been originally shipped for Montreal or some port east of Montreal before entering the Welland Canal; and,

(2) Shall be shown to have been actually carried to Montreal or some port east of Montreal.

(3) Transshipment, if at a Canadian intermediate port, shall not prevent the refund aforesaid being made.

This order in council shall remain in force only for the present year, 1891.

JOHN J. McGEE,
Clerk of the Privy Council.

REVENUE FROM CANALS.

DEPARTMENT OF RAILWAYS AND CANALS,
Ottawa, March 31, 1891.

In carrying out the provisions of the foregoing order in council, the collector of canal tolls at Port Colborne, Welland Canal, will collect the full rate of tolls and issue an official voucher therefor; the reduction will be paid by the department as a refund upon evidence being furnished by the shippers that the conditions of the order in council have been complied with.

The vouchers, properly indorsed, must in all cases accompany the application for a refund of the tolls referred to.

B. H. TEAKLES,
Chief Clerk, Canals Revenue.

DEFINING THE ORDER IN COUNCIL.

GOVERNMENT HOUSE,
Ottawa, Wednesday, April 29, 1891.

Present, His Excellency the Governor-General in council.

His Excellency, under the authority conferred upon him by chapter 37 of the revised statutes, intituled "An act respecting the department of railways and canals," and by and with the advice of the Queen's privy council for Canada, is pleased to order that the provisions of the order in council of the 25th day of March, 1891, authorizing the reduction of toll to two cents (2 cents) per ton for the passage through the Welland and St. Lawrence canals of certain agricultural products therein named shall be understood to apply to any portions of such cargoes lightered at Port Colborne and reshipped at Port Dalhousie, and also that the provisions of the said order be made applicable to the therein-named products when shipped from Canadian Lake Ontario ports.

JOHN J. McGEE,
Clerk of the Privy Council.

REDUCTION OF CANAL TOLLS.

Certified copy of a report of a committee of the Honorable the privy council, approved by His Excellency the Governor-General in council on the 18th of May, 1891.

The committee, on recommendation of the minister of railways and canals, advise, with reference to the orders in council dated, respectively, the 25th of March and the 29th of April last, authorizing the reduction of canal tolls on certain food products, the provisions of which

orders are carried out by way of refund of the excess of tolls paid, that such refund be made after the close of the present season, on or about the 1st day of December, and not during the season, as heretofore.

JOHN J. McGEE,
Clerk of the Privy Council.

CONSUL-GENERAL LAY TO SIR JOHN MACDONALD.

[Inclosure 3 in Consul-General Lay's report.]

UNITED STATES CONSULATE-GENERAL,
Ottawa, May 19, 1891.

SIR: Application has been made to the Department of State at Washington to know whether the order in council of March 25, 1891, in reference to the rebate on canal tolls precludes transshipments made at United States ports from the benefit of such refund.

It is understood that shippers of grain by the lakes and Welland and St. Lawrence canals construe the order in council as excluding the refund to all such transshipments.

I am instructed by the Department to report on this subject, and I have the honor to request to be informed by you of the proper interpretation of said order as applying to United States ports.

I am, etc.,

RICHARD G. LAY,
Consul-General.

BUSINESS AND REVENUE OF CANADIAN CANALS.

[Inclosure 4 in Consul-General Lay's report.—From the official report of 1891.]

The total revenue from canal tolls for the season of 1890 was $348,059, compared with $381,109 the previous year, an apparent decrease of $33,049, but an actual decrease, taking an account of rebates, of $25,959.46.

Of the 245,932 tons of grain which passed through the Welland Canal to United States ports 16,433 tons were transshipped at Ogdensburg and passed down the St. Lawrence to Montreal.

As this was a new departure in the transshipment of grain for Montreal, and not anticipated at the time of passing the order for the reduction of tolls on grain, it was not considered that the transshipment of grain at a United States port came under the order in council of February 27, 1890. Upon the urgent request of the forwarders and others, His Excellency in council, on the 22d of November, 1890, passed an order in council authorizing a refund of tolls paid on the Welland and St. Lawrence canals above 2 cents a ton on the quantity of grain so transshipped at Ogdensburg for Montreal. The rebate on the former amounted to $2,957.94 and on the latter to $232.04.

The quantity of grain passed down the Welland Canal from United States ports to United States ports has steadily increased each year, from 47,029 tons in 1880 to 245,932 tons in 1890, an increase of 198,903 tons.

The quantity that reached Montreal through these canals for 1890 was 228,513 tons, compared with 267,769 tons in 1889 and 333,806 tons in 1880, showing a decrease for 1890 from 1889 of 39,256 tons and from 1880 of 105,293 tons.

The railways have become great competitors with the canals for the through grain trade. While the through grain traffic on the canals is declining, the quantity carried eastward by rail is yearly increasing both in Canada and the United States.

The canal grain trade decreased 11.92 per cent. in Canada last year and 8.94 per cent. in the United States, while the increase in the quantity of grain carried by rail was 25.55 per cent. in Canada and 22.72 per cent. in the United States.

The quantity of barley, corn, oats, peas, rye, and wheat arrived at Montreal via the Grand Trunk and Canadian Pacific railways for a period of 9 years is reported as follows:

Year.	Quantity.	Year.	Quantity.
	Tons.		*Tons.*
1882	75,026	1887	191,760
1883	98,672	1888	113,794
1884	142,231	1889	94,943
1885	160,821	1890	119,208
1886	165,613		

The quantity of the same articles passed down the whole length of the St. Lawrence canals to Montreal for the same period was as follows:

Year.	Quantity.	Year.	Quantity.
	Tons.		*Tons.*
1882	230,055	1887	237,881
1883	263,368	1888	166,191
1884	174,496	1889	275,414
1885	134,824	1890	242,571
1886	272,133		

The quantity of grain passed down the whole length of the St. Lawrence canals to Montreal is as follows: 1889, 275,414 tons; 1890, 242,571 tons; decrease, 32,843 tons.

The quantity of grain to Montreal via the Canadian Pacific and Grand Trunk railways is reported as follows: 1889, 94,943 tons; 1890, 119,208 tons; increase, 24,265 tons.

The quantity of grain to tide water by New York canals is reported as follows: 1889, 1,242,804 tons; 1890, 1,131,289 tons; decrease, 111,615 tons.

The quantity of grain carried to tide water by the New York railways is reported as follows: 1889, 2,481,501 tons; 1890, 3,045,302 tons; increase, 563,801 tons.

The increase and decrease for 1890, as compared with 1889, on the several routes competing for the carrying trade to the seaboard are as follows:

Routes.	Quantity.		Percentage.	
	Increase.	Decrease.	Increase.	Decrease.
	Tons.	*Tons.*	*Per cent.*	*Per cent.*
St. Lawrence canals	.....	32,843	.....	11.92
Canadian Pacific and Grand Trunk railways	24,265	.....	25.55	.....
New York canals	.....	111,615	.....	8.94
New York railways	563,801	.....	22.72	.....

TRANSSHIPMENT OF GRAIN.

Two Canadian vessels took their cargoes of 1,064 tons of grain through to Montreal intact in 1888, against 1 with 425 tons in 1889 and 3 with 1,281 tons in 1890; 39 Canadian vessels lightered their cargoes at Kingston in 1888, against 54 in 1889 and 63 in 1890; 201 vessels discharged the whole of their cargoes at Kingston in 1888, against 267 in 1889 and 172 in 1890. The quantity of grain transshipped at Port Colborne in 1890 and the 3 previous years is given below. The total number of grain-laden vessels lightered at the port in 1890 was 83, against 47 in the previous year. Three vessels entered the canal without unloading in 1889, but none in 1890.

The quantity of grain lightered was as follows:

Grain.	1887.	1888.	1889.	1890.
	Bushels.	*Bushels.*	*Bushels.*	*Bushels.*
Wheat	83,850	11,440	37,222	4,310
Corn	263,277	133,014	254,690	773,687
Oats	.....	.....	8,218	44,294

The quantity of grain passed down the Welland Canal in Canadian and United States vessels to Kingston for 5 years is as follows:

Year.	Canadian vessels.		United States vessels.	
	No.	Tons.	No.	Tons.
1886	244	143,330	97	62,222
1887	284	178,233	19	12,477
1888	182	143,025	60	43,667
1889	208	165,117	114	108,358
1890	203	184,275	35	35,560

The quantity of grain discharged in this port from vessels which did not enter the canal was as follows:

Grain.	1888.	1889.
	Bushels.	*Bushels.*
Wheat	72,592	8,608
Corn	23,575	.....

Notwithstanding the enlargement of the Welland Canal, the number of vessels having to lighter a portion of their cargoes from 45 to 80 tons each has reached 83, the highest number for any year since 1880. Of these, 81 were United States steam vessels and 2 United States sailing vessels.

COTTON-GROWING IN RUSSIA.

REPORT BY CONSUL-GENERAL CRAWFORD, OF ST. PETERSBURG.

In obedience to instructions dated January 26, 1891, I have made a study of cotton-growing in south and oriental Russia, and I have prepared the following report upon this important branch of agriculture for the use of the Department.

The cultivation of cotton in the Transcaucasus is gradually extending; especially has that of American cotton lately made rapid progress. This progress is particularly remarkable in eastern Transcaucasus, and, above all, in its principal center, the province of Erivan, where very favorable soil for cotton-growing is found. In western Transcaucasus, where economical conditions are at great variance with those of the east, cotton culture, if it improves at all, does so but slowly. I have no information concerning the cotton crop of 1888 in western Transcaucasus, but I have a sufficiently detailed account of the conditions of growth and crop of cotton in eastern

Transcaucasus, and particularly of that in the province of Erivan, furnished by M. Taratinow, manager of an experimental cotton-culture station in Erivan.

The spring and summer of 1888 in the province of Erivan having been unusually cold and rainy, agricultural products in general, and cotton in particular, were irregular and poor. There were but a few hot days in the beginning of August when the temperature rose to +33° Réaumur in the shade; during the other portion of the season the weather was so cool that melons and grapes ripened only in September. On the 25th and 26th of August heavy rains fell, unusual at that time of the year, after which the temperature lowered considerably. A hailstorm, which on the 10th and 13th of June ravaged several cotton fields in the Etchmiadzin and Soormalinsk districts, almost entirely destroyed the cotton crop. A wet summer and other unfortunate circumstances developed the cryptogamic disease known as rust to an extent unheard of before. The rust, which had blighted American cotton in former years, had never been observed on the local product, called "kara-kosa." At first the rust appeared on the cotton plant in the districts of Charoursk, at Arazdayan (Erivan), and of Soormalinsk, where the dampness of the ground and other conditions were favorable to its development. From these places the disease spread over other districts, destroying almost 50 per cent. of the crop. In the Etchmiadzin district, where the ground is not so marshy and damp, the rust appeared only at the end of August, and in a milder form than in the above-mentioned places, where by this time the cotton plant, under the progress of the disease, stood leafless and deprived of half its fruit. In the Nakhchivan district, where there are no swamps and water is not abundant, the rust did not appear at all. The character of the disease which caused such disaster in the province of Erivan is the same as that known in America by the name of black or brown rust, which affects the cotton plant, and is occasioned by too much dampness. Both the quality and quantity of cotton were impaired last year in the province of Erivan by early frosts, which began about the 10th of October, and finally destroyed the plants.

In consequence of the circumstances related above, the cotton crop of the province of Erivan for 1888 was considerably less than the average, and in some places it was very poor. The province of Erivan produced about 14,400,000 pounds of cotton of superior grade in 1887, and, having enlarged its plantations to a great extent in the Charoursk, Etchmiadzin, and Nakhchivan districts, it only yielded about 10,800,000 pounds in 1888, that is to say, two times less than was anticipated. Besides this, the quality of the cotton proved inferior to that of 1887.

The bad quality of the cotton had an unfavorable effect on its price. In 1887 the average price of cotton was 10 rubles ($5) per 36 English pounds, and in 1888 it did not exceed 7 rubles ($3.50). The price of cotton at Erivan in December, 1887, was: For cotton from American seed, from $4.50 to $5.50 per 36 pounds, and it rose to $6.25, or 5¾ cents per pound, for

the best grades; the local cotton was sold at from $3.50 to $4.50, and even $5.50, per 36 pounds in 1887, while in 1888 for the best kind of cotton from American seed $4 to $4.20 per 36 pounds were paid, and local sorts were sold at from $2.75 to $3.75 per 36 pounds.

Last year's cotton crop in the province of Erivan was all the more unsatisfactory because of the fact that such pains had been taken by several firms in the Caucasus to improve the culture of cotton in the province of Erivan, and the plantation had been largely increased.

The Industrial Trading Society and the great Yaroslaw Manufacturing Company ordered from America 108,000 pounds of cotton seed and sixteen gins. The cotton seed was immediately distributed among the inhabitants, without cost, on the sole condition that the crop from this seed should be sold to the above-named firms according to the existing price in the Erivan market. The gins were established in the most important centers of cotton culture, namely, Bashnoorashen, Engidje, Etchmiadzin, Igdeer, Koolpach, and others. Nothing was charged by the above-named firms for the use of the gins to parties who were selling them their cotton, while others, selling their cotton elsewhere, were required to pay one-twentieth of the crop as toll to the ginning mills.

The same firms established presses in the province of Erivan, which worked during 10 hours daily and pressed from 30 to 40 bales of cotton. Besides these facts, the Yaroslaw Manufacturing Company has erected in Erivan its own buildings, such as granaries, press houses, offices, etc. All this makes it evident that the cotton culture in the province of Erivan is not only gradually increasing, but has succeeded in attracting the attention of Russian manufacturers, thus securing the sale of the cotton on the spot. The importance of this culture for the local inhabitants is demonstrated by the fact that in 1887, in the district of Erivan alone, ninety-one villages were occupied with this branch of agriculture, and in the district of Charoursk only four villages out of sixty-one did not cultivate cotton because they had not the proper quantity of water required by the cotton plant. In the district of Etchmiadzin cotton was planted everywhere where a sufficient quantity of water for summer irrigation was expected.

In 1888 a very interesting experiment was made at the cotton-culture station in the Garden of Sardar, at Erivan, relative to the culture of different kinds of cotton. The result of the experiment was not conclusive as to the choice of the fittest kind for local cultivation, but none the less deserves mention. The cotton plant which proved to mature sooner than any others was the Shines' Early, of North Carolina, which, although sown much later than other kinds, blossomed first and produced the richest results. The second kind which matured early was the plant known as Allen's Long. A third kind, obtained from seed from the State of Virginia, appeared next on the list for early maturity and first in quality and quantity of fiber (36 per cent. raw), having extraordinarily long, shiny, thin, and strong staple. The fourth kind, especially recognized for its early maturity and the extraordinary size of the boll (attaining that of a hen's egg), was the Duncan Mastodon Pro-

lific. The fifth kind, very like the latter, is Oxier's Silk, and is the sort generally adopted throughout Erivan. The other kinds did not distinguish themselves in any way, excepting the Sea Island cotton, which did not ripen at all, being destroyed by the frost on the 10th of October without having produced a single ripe pod.

These experiments can not be considered as conclusive, because, first of all, they have existed for too short a space of time, and, secondly, because American cotton seed is liable to undergo alteration in the change of soil and climate if sown during several years consecutively in this country; yet these experiments are interesting because they are the first that have been made systematically on the different varieties of American seed. Mention is also made of a kind of experiment made by the firm of Savy Morosoff, in Karayaze, in the province of Tiflis. This experiment consisted in sowing the cotton seed on sample fields in different parts of the Transcaucasus, in order to find out the soil and climate required for this kind of culture. This experiment failed on account of the unfavorable conditions of the weather in the spring and summer of the year 1888 in the province of Erivan. To the above misfortune must be added the appearance of the boll-worms at the end of July, which injured and destroyed the blossoms and pods until the end of September; thus a plantation of 281 acres yielded only 36,000 pounds of raw cotton, or about 10,080 pounds of clean fiber. The firm of Savy Morosoff ordered 25,000 pounds of Texas and Louisiana cotton seed, which they proposed sowing on 155 acres of land at Karayar and 76 acres at Bozchalinsk, in the province of Tiflis. The second experiment of raising American cotton was made in the district of Kooban, province of Bakinsk, and evidently proved satisfactory.

The endeavors made to introduce American cotton in Turkestan began in the year 1870, but it is only recently that the new culture has begun to take root and improve rapidly. This fact is rendered evident by the following agricultural statistics: In 1884 about 810 acres of land were sown around Tashkend, which produced 360,000 pounds of cotton; in 1885 2,700 acres of land were sown, and yielded 1,080,000 pounds of cotton; in 1886 American cotton seed was sown on 32,400 acres, and the crop was expected to render 3,600,000 pounds of cotton, but, in consequence of morning frost, it gave only 2,160,000 pounds; in 1887 38,712 acres of land were sown with American seed, almost all in the neighborhood of Tashkend, and produced 7,632,000 pounds of cotton fiber, worth over $750,000.

According to official data obtained in 1888 the cotton plantations occupied—

District.	American.	Persian.
	Acres.	*Acres.*
Syr-Darya	35,762	17,194
Ferghana	55,304	85,572
Samarcand	2,454	18,846
Total	93,520	121,612

As far as can be realized from reports presented (some of which, as those relating to the district of Samarcand, are evidently false), the proceeds expected from the crop in 1888 were:

District.	American.	Persian.
	*Pounds.**	*Pounds.**
Syr-Darya	9,685,656	2,130,552
Ferghana	9,994,248	12,221,028
Samarcand	538,128	1,738,644
Total	20,218,032	16,085,224

* English.

Thus the cotton culture in Tashkend produced this year 20,218,032 pounds from American seed and 16,085,224 pounds from local seed, making a total of 36,303,256 pounds, valued at about $3,500,000. The actual result of the local cotton crop is much greater than that shown, but the natives try by every means to hide the real result for fear of having to pay cotton-field taxes.

Clean cotton sold in Tashkend at 10½ cents a pound from American seed and 7½ cents per pound for that from local seed.

This year's cotton crop in the Syr-Darya district was much below the average in consequence of cold nights in the month of August and the beginning of September, which prevented the ripening of the pods. Half of the fruit was frozen and produced unripe fiber of an inferior quality. In some places cotton was impaired by a caterpillar, the *Heliothio armigera.*

In the Ferghana district the crop was much finer and more regular. The average yield per acre of raw cotton from American seed was 533 pounds, and from local seed only 426 pounds, per acre. One-third part of this quantity is clean fiber. The Syr-Darya statistical committee presented the following statement concerning the results of cotton culture and the prices of cotton in the district of Syr-Darya:

In 1888 there were sown 69,770 acres of land, of which 27,259 acres were sown with local seed and 42,511 acres with American seed. The crop obtained was 7,471,728 pounds of raw cotton from local seed and 30,625,740 pounds from American seed. The clean local cotton sold at 6½ and 7½ cents per pound, and the superior grade of American seed cotton sold at 10½ and 11 cents, the lower grade bringing from 6¾ to 8⅓ cents per pound. The inferior grade consisted of about one-sixth of the crop. In the Amoo-Darya for a pound of unclean cotton from local seed 1¾ cents was paid and for clean cotton 8¼ cents, while unclean cotton of American seed sold at 3 cents per pound and clean cotton at 11 cents per pound. The conditions required for the growth of the cotton plant in 1888 were quite favorable. The sowing was done in April, and it turned out that some of the seed had been destroyed, and the first growth impaired, by a caterpillar of the butterfly *agrotis*, so that some portions had to be sown over again. Harvest took place between October, 1888, and January, 1889. The ripening of the cotton was

somewhat delayed by the low temperature in September. In some places the sowing of cotton was prevented by a hot and dry wind on the 15th and 16th of July and on the 2d and 3d of August.

The tillage of fields and all the other works necessary to cotton culture were more expensive this year than usually, hand labor being dear. The fiber was inferior to that of 1887. In 1888 the tillage of an acre of land cost Russian planters from $16 to $20 and the natives from $6.50 to $7.

In the Khiva-Khanate, according to reports obtained from the Amoo-Darya department in 1888, there were 5,392 acres of land sown with 1,078,200 pounds of seed. Only local seed was used, which gave a crop of 12,938,400 pounds of cotton. Unclean cotton sold at 65 cents, and clean cotton at $2.97, for 36 English pounds.

In the district of the Transcaucasus the works for the irrigation of the Merv Oasis were carried on with great energy, and small fields of cotton were planted, which apparently gave satisfactory results.

Among the seed sent by the agricultural department to the south of this Empire and to the Caucasus for experiments was cotton seed produced in Macedonia, which was supplied in the spring of 1888 to persons and establishments who desired to make experiments with this variety. These experiments were made in the provinces of Kief, Kherson, Taurida, Astrakhan, and Samara, and also in the territories of the Don, Tersk, and Kooban. Notwithstanding the facts that the seed was sent rather late and that the summer of 1888 was cold and damp, it was reported to the agricultural department from some of these localities that the cotton plant had not only blossomed, but had given quite ripe fruit. The most favorable results had been obtained in some parts of the provinces of Kherson and Astrakhan, and also in the territories of the Don, Tersk, and Kooban, where nearly all the fruit of the cotton plant matured and gave ripe fiber sufficiently long, silky, and strong.

These experiments were, however, too few in number and of too recent date to be conclusive as to the possibility of introducing cotton culture in the southern provinces of Russia to the best advantage, but they rendered evident the fact that cotton-growing, even under unfavorable circumstances, may be made successful in many localities in the south and east of this Empire.

J. M. CRAWFORD,

UNITED STATES CONSULATE-GENERAL, *Consul-General.*

St. Petersburg, February 26, 1891.

THE DEPOPULATION OF FRANCE.

REPORT BY CONSUL KNOWLES, OF BORDEAUX.

A cry of alarm, emanating from a no less distinguished physician than Dr. Lagneau, of Paris, and embodied within an address delivered before the Academy of Medicine, has recently been resounding throughout France.

The nature of this outcry, or I should rather say its subject, is the depopulation of the French Republic.

The topic is not a new one. M. Charpentier has several times before warned his fellow-citizens of the appalling decrease in their country's birth rate. Statisticians, scientists, political economists, hygienists, and literateurs join periodically in one grand chorus, urging the sterner sex to more conscientiously and patriotically fulfill the obligations of life; in short, to present the State with more sons and daughters.

Not long ago the Journal Officiel gave its readers some very interesting statistics regarding the annual decrease in the population and the extremely serious condition of affairs that has for some time past been hovering like some frightful nightmare over the French people. The writer of the article does not hesitate to assert that, unless some immediate change takes place, the French nation will, in a comparatively short space of time, be totally extinct.

The following statement shows the births in France from 1884 to 1888, inclusive:

1884	937,750
1885	924,558
1886	912,838
1887	889,333
1888	882,637

The decrease, it will be readily observed, is neither gradual nor interrupted. To make use of a somewhat facetious expression of the writer, "the array of figures, at first glance, looks like a succession of bad crops."

What is to be done? The problem awaits solution.

As far as nature herself is concerned, she has, since the creation, taken the wisest and most practical precautions regarding the conservation of species, and our alarmed and disquieted savants have nothing to ask of her. It is evident that the *radix mallorem* lies with the Gallic race. If the remedies to be applied, however, are as numerous as the various theories propounded, their proper employment and administration will be a science in itself.

There exists a certain set (members of the French Academy of Medicine) who state that the steady decrease in the birth rate of the Republic is due to the existence of diseases difficult to name. Others, in turn, assure us that these diseases are less prevalent in France than in any other civilized country, and statistics would seem to confirm the statement.

There are those who condemn late marriages and attribute to them the present condition of affairs. Contrary-minded ones are opposed to the *vinculum matrimonii* too early in life. These dissenting gentlemen may possibly convene and prescribe the proper age.

Marriage is a most difficult proceeding at best under the French law, and the documents and papers necessary for its accomplishment not only wearisome to obtain, but extremely expensive. The rigorous formalities imposed in the process of acquiring a marriage certificate should be abolished by the Republic, the fees reduced, and the entire execution simpli-

fied. France, for a number of very good reasons, is preëminently a country of taxation. There is a tax on life and a tax on death; there is a tax on existence in general. Perhaps, were there not so much taxation, and were the French people partially relieved of the burden they have to bear in order to support the largest standing army in the world, the birth rate would increase and more children than the poorer classes can now conveniently provide for and educate would be brought into the world. And yet how to reduce these very taxes is a question of more than momentary consideration.

It has been proposed, nevertheless, upon a number of occasions in the Chamber of Deputies to temper taxation in proportion to the number of children in the family of the taxpayer. For example, the father of seven children would be entirely exempt from taxation; the father of six children, liable for one-seventh of the tax; the father of five, two-sevenths; four, three-sevenths; and so on in inverse proportion. On the other hand, in order to counterbalance the deficiency in the revenue caused by this system, a tax would be levied upon bachelors, increased year by year in direct proportion to their ages, thus offering a continual incentive to matrimony. The idea is an excellent one, and should be put into practice at once.

The fears of Malthus, who contended that in the human species the product was endowed with the same power of production as the producer—that is to say, that if one produced two, two would produce four, four eight, and so on, and that, unless a brake were put upon the reproductive power of man, the epoch would arrive when the inhabitants of the globe would be unable to find subsistence sufficient to its requirements—have no terrors for the French.

Within a few days Monsieur Rochard, who some time since was charged with the commission to investigate and report on the depopulation of France, has made known the results of his labors in a lengthy paper read before the Academy. It is classed into ten separate heads. Five of these divisions serve to advance the theory that smallpox and varioloid are prime factors acting in the depletion of the population. Vaccination is recommended and encouraged in order to remedy the evil. The remaining five paragraphs are of no importance.

It is scarcely within the province of this report to comment upon the various individual theories advanced upon the subject within the walls of the Academy of Medicine or elsewhere. The paper in question, however, illustrates in a measure how readily some of the French savants are misdirecting their energies. It is not from this angle of vision that a remedy is to be found. Smallpox is no more prevalent in France than in other countries. It is a side issue of a side issue, and not worth discussion. Local municipal regulations and the health authorities will look after it as well as other diseases. The facts presented are significant, and it is obvious that, if any official action is to be taken in the matter, it must not be delayed. It is absurd for the French scientists to retard the wheels of progress by indulging in pet theories.

The revision proposed in the system of taxation is a reasonable one, and would, no doubt, if put into operation, produce beneficial results. Let the Government put a premium, instead of a forfeit, on birth, make the marriage license more readily attainable, stimulate celibates to matrimony, and note the consequences.

HORACE G. KNOWLES,
Consul.

UNITED STATES CONSULATE,
Bordeaux, March 10, 1891.

TRADE AND INDUSTRIES OF WINDSOR, ONTARIO.

REPORT BY CONSUL JOSLYN.

AGRICULTURE.

Agriculture occupies the attention of the greater portion of the people of this district. The main articles of export are horses, sheep, beans, barley, stave and heading bolts, hard-wood lumber, wood, charcoal, and hides. All these may be properly classed as agricultural products, because nearly all the farmers utilize their time in winter to get out bolts, wood, lumber, and charcoal. In fact, it may be said that they rely fully as much on their winter, as their summer, work. The market for these products is the United States, and undoubtedly will be as long as the material lasts.

The new tariff law enacted by our Congress last year will materially diminish the acreage planted and sown to beans and barley. The stringent regulations relative to the importation of breeding animals has practically stopped the exportation of cheap and inferior animals, especially horses. As a consequence, horses which would sell readily last year for $125 can not be sold for more than $75 now. As this difference is far greater than the difference between the old and new tariffs, it is fair to conclude that the cause of the depression is in a great measure due to the new provisions relative to breeding animals. That the farmers in this district realize the disaster which has overtaken them is shown by the table herewith sent in connection with the subject of emigration.

The Canadian farmer is also handicapped by the high price of agricultural implements. In fact, it may be said that all machinery is fully 15 per cent. higher here than just across the river, while furniture is 20 per cent. higher, and at the same time is much inferior in quality and design.

The mortgage laws, too, give the money-lender a much stronger hold on the farm than in the United States. Inasmuch as a decree of foreclosure may be had which passes the title without resort to a sale, some lenders prefer a second to a first mortgage, if the margin is sufficient. One capitalist in this county has acquired several thousand acres by the process of loaning on and foreclosing second mortgages. Having sufficient means to control the first mortgage, he pays it or lets it run, whichever is most profitable to him.

The average price of farming land is about $40 per acre. The soil is good and very productive, and is especially well qualified for diversified farming.

EMIGRATION.

The emigration from this district has been something remarkable. I have prepared a small table showing relatively the emigration from this district during the last 4 months of each year for 10 years past:

Year.	September.	October.	November.	December.	Total.
	Number.	*Number.*	*Number.*	*Number.*	*Number.*
1881	3	4	3	2	12
1882	2	1	1	2	6
1883	4	2	2	.....	8
1884	2	5	2	.....	9
1885	6	6	7	6	25
1886	8	3	2	3	16
1887	1	3	2	3	9
1888	.....	2	1	2	5
1889	4	7	4	1	16
1890	40	55	34	19	148

The foregoing shows that in the last 4 months of the year 1890 forty-two more emigrants went from this district than during the corresponding months of the entire preceding 9 years.

I have no records to show what proportion of these emigrants had families, but I know from recollection that of those who went during the last 4 months of 1890 at least 90 per cent. had families.

The total value of the personal and household effects taken to the United States by emigrants during the said 4 months of 1890 was $30,691.80. It should be borne in mind that these records do not show all the emigration, but only of those whose effects amounted to $50 and upwards, and from December 1 only those whose effects amounted to $100 and upwards.

The greater portion of these emigrants, as I have already said, were farmers, and were desirable additions to our wealth-producing class. I do not recall one of the farmer class who could not read and write. Every one went directly to some farm usually already bargained for or rented.

Of the laborers nearly all were skilled, intelligent, and fairly educated, and generally had enough household effects to start comfortable housekeeping.

It is apparent, therefore, that the emigration from this district is not of the "pauper" kind.

LABOR.

I have made labor a subject of consideration and investigation nearly every week since I came to this office, with a view, originally, of informing myself for another purpose than reporting the same to the Department.

So far as unskilled labor is concerned, there is no material difference between the rate of wages paid in this district and the rate in Michigan or other Western States. Every summer from 400 to 500 common laborers residing in Detroit can be seen daily crossing the Detroit River to work on

sewers and paving and grading streets in Windsor. There are seven branches of Detroit manufacturing houses located here, and, so far as I can learn, all pay the same wages to common laborers here as in Detroit.

It is true, however, that the same ferryboats which bring these laborers to Windsor take, on their return trip, about an equal number of skilled laborers to their daily work in Detroit, where they can secure better wages than here.

While it is true that there is no difference in wages paid to common laborers, it is equally true that wages paid to skilled labor are higher the moment the border line is crossed; and the more skilled the labor the more marked the difference in the rate of wages paid. Neither is the distinction between this port and Detroit an exception to the rule. While it is true that wages in Windsor are slightly higher than in the interior of Ontario, it is also true that wages in Detroit are higher than in the interior of the State.

I have investigated all branches of industry—lumbering, logging, shipping, manufacturing, and farming—and in all these the rule holds good, viz, that there is no material difference between wages paid to common laborers in Ontario and those paid in Michigan, but that there is a marked difference in favor of the United States between wages paid to skilled labor in the two countries.

I can not forbear the remark that our own country puts a premium on intelligent labor.

COST OF LIVING.

Closely connected with this subject is the question of the cost of living. When I removed my habitation to Windsor, I was much surprised to find that living expenses were higher than at home. All kinds of meat, flour, and corn meal are slightly higher, while groceries are at least 20 per cent. higher. As to the grade or quality, meats and all canned goods are much inferior to our own, excepting mutton; as to the latter, I have never found anything in the United States that can compare with Canadian mutton.

All kinds of cotton goods are 50 per cent. higher here than in Detroit. The finer grades of woolen cloths are about 25 per cent. cheaper here; but the coarser goods, either in the cloth or made up into goods, can be had from 10 to 15 per cent. cheaper in the United States.

The condition of things relative to rents is somewhat peculiar. For $25 per month a house and grounds can be had here, which would rent for $50 in any town in the United States of equal size. In Detroit, for instance, such a place would rent for five times the amount. But a better house can be had in Detroit for $15 or under than can be got in Windsor for a like amount. The average laborer, therefore, can not rent a house in Windsor any cheaper than, if as cheap as, in Detroit.

I have observed quite a number of cases where skilled workmen from London, Toronto, and other places have secured positions in Detroit, at the same time moving their families to Windsor, getting the higher wages in Detroit, and, as they supposed, getting the benefit of the cheaper living in Windsor; but in most cases after a month or two they have removed their families to Detroit.

The situation, so far as cost of living is concerned, seems to be this: the man of wealth or with an independent income can live and gratify his tastes and desires at less cost than in the United States, but the intelligent wage-earner and the man who has to earn his own living can get better remuneration for his brains and labor in the United States, and support and educate his family at less cost.

The foregoing is purely the result of investigation, and not of preconceived notions.

MANUFACTURES.

Up to 2 or 3 years ago the only manufacturing industry of any moment in this district was that of whisky. The large distillery here is owned by H. Walker & Sons, residents and citizens of the United States. They manufactured last year 1,473,369 proof gallons; their total sales for the same period were 1,103,419 proof gallons. As yet they have not exported much to the United States, the exports last year only amounting to 2,674 gallons. They expect to increase their exports to the United States to about 50,000 gallons this year.

There are now seven branches of Detroit manufacturing houses established in Windsor. They are not inclined to give the amount of their Canadian business, but I am able to state that it will run from 5 to 7 per cent. of their trade. About the only other manufacturing industry is that of staves, concerning which I have already made a special report.

RAILROADS.

There are now three trunk lines of railway centering at Windsor, viz, the Michigan Central, the Canadian Pacific, and the Grand Trunk.

The Canadian Pacific has a through connection with the States west by means of the Wabash. At the present time it is claimed it is carrying to the seaboard fully 60 per cent. of the dressed beef trade.

The Grand Trunk line crosses the border at Port Sarnia, and is continued through to Chicago as the Chicago and Grand Trunk. The Great Western branch of the Grand Trunk Railway comes to Windsor, and also has an outlet by way of the Wabash.

There is a state of affairs that may possibly be worthy of the attention of the Government in the near future.

Some years ago the western roads adopted the practice of carrying grain from the far west to the seaboard, but granting the privilege of stopping en route for milling purposes. This practice, I understand, was instigated by the Minnesota flouring mills to enable them to get the grinding of Manitoba wheat. But other millers—Canadian as well as American—were not slow to see the point, so that now grain is shipped on all the roads before mentioned with milling privileges in Canada.

In view of the fact that the Canadian Pacific will, no doubt, take the greater portion of the Manitoba wheat, I thought that it might possibly become a question whether or not the practice may not eventually build up Canadian

flouring mills at the expense of our own. I have not the means of knowing whether the practice is beneficial or otherwise.

SHIPPING INTERESTS.

As the Department has other and better means of information relative to the shipping interests than I can give, I shall only touch upon the subject of wrecking.

The feeling of hostility among owners of wrecking vessels on either side toward the wrecking laws and regulations of the other country seems to be on the increase. I am not inclined to the opinion that the hostility is justified by the circumstances.

I am obliged to say that I can see no material difference between our laws and regulations and those of Canada. As far as I can learn, however, nearly all who are well informed on the subject in either country agree that the wrecking laws might be modified to the advantage of both vessel and cargo-owners. The wrecking business dwindles into insignificance when compared with the capital invested in our great lake carriers and the value of the cargoes transported by them. Rapid transit has become an important factor in the earning power of our freighting vessels. Between Lake Huron and Bar Point, at the head of Lake Erie, are many dangerous shoals and impediments to navigation, and the stranding or grounding of vessels is an almost daily occurrence. I believe it would be a benefit to the lake commerce if a vessel aground or otherwise disabled were allowed to avail herself of the nearest assistance without the delay of first obtaining the permission of one government or the other, as is now the case.

IMPORTS AND EXPORTS.

I am indebted to Mr. Miles Cowan, acting collector of customs at this port, and to his obliging assistants for a portion of the figures below. The Canadian collection district is about the same as this consular district. These figures cover the year 1890.

IMPORTS.

From the United States	$1,294,065
From other countries via United States	71,348
From other countries via Halifax	8,013
Total	1,373,426

EXPORTS.

To the United States:	
Declared	562,569
Undeclared	252,445
To all other countries	52,022
Total	867,036
Imports from the United States	1,294,065
Exports to the United States	815,014
Excess of imports	479,051

Of the imports a large proportion was coal. Of the exports agricultural products formed the greater portion, including wood, staves, stave bolts, and logs.

I am sorry not to be able to give the classification and quantities thereof in detail.

EDUCATION.

It is, perhaps, sufficient to say that the public schools here are much like our own, and in every way excellent.

A feature peculiar to this district may be of interest. Although the law grants separate management for Catholic schools, they are here, by agreement or tacit understanding, under one management, known as the Union School Board. This board erects all the buildings and maintains all repairs. It hires all the teachers, the only limitation being that the teachers for the Catholic schools must be approved by the priest of the parish where the schools are located.

This system has been maintained for many years, and both Protestants and Catholics seem to be well satisfied with the arrangement. As each taxpayer has the right to say what school he wishes to support, there is no difficulty in ascertaining the proportionate expenditure for the Catholic schools.

There are phases of the school question, however, which bid fair to become political questions in the near future, and are liable to have a direct bearing on the relations between the Dominion and the United States. I do not know that it is proper for me to go into the subject, and therefore leave it.

CHAS. D. JOSLYN,
Consul.

UNITED STATES CONSULATE,
Windsor, May 22, 1891.

WAGES AND FOOD PRICES IN HAVRE.

REPORT BY CONSUL WILLIAMS.

I have the honor to transmit as inclosures herewith lists showing the wages paid here in ninety-four occupations, with hours of service and certain special features noted, and the prices of seventy-seven articles of food, fuel, etc., as items of common domestic outlay.

The prices in both lists have been obtained by most careful special inquiry, and are reliable for this month (May, 1891), and are subject to only very slight variations during the year.

In order to insure ready and full understanding, I have reduced weights, measures, and money to the nearest United States equivalents.

The reason why a few of these articles, so high in price here, are still articles of export to the United States, where they are sold much cheaper than here, is that by export all customs duties here are rebated, and the exporter avoids, also, the local tax (octroi), which is by far the more burdensome,

while the same articles are admitted duty free to the United States and pay no local tax whatever. For example, a 40-gallon cask of vinegar pays here a duty of $1.32, and is taxed at the octroi $3.81 besides, before it reaches the consumer, or a total of $5.13 per 40 gallons, which is in excess of the average American price. Again, the duty here on all grades of raw coffee is 14 cents per pound, which nearly or quite equals the average wholesale price in the United States during the period from 1880 to 1890. In other words, if the coffee-consumers of France were to receive their coffee gratis in Brazil, it would still cost them as much when on their tables as is now paid, or as has for many years been paid, by the consumers of the United States.

My preparation of the lists has been inspired as an answer, at least in part, to the question why emigrants crowd every steamer leaving Europe destined for the United States, and to show the most patent and potent fact that if any Europeans live cheaper than do similar classes in the United States it is simply and solely because they live vastly poorer.

Such figures as I inclose—and at least equally unfavorable ones might be stereotyped for all Europe—make indelible the conviction that the United States is the best place on earth for a man to live, whether he be rich or poor.

OSCAR F. WILLIAMS,
Consul.

UNITED STATES CONSULATE,
Havre, May 20, 1891.

WAGES IN HAVRE.

[Inclosure 1 in Consul Williams's report.]

The hours of service and wages of ninety-four occupations in Havre are as follows:

Blacksmiths, $1.25 per day, working 10 hours.

Bookkeepers, $48.25 to $67.55 per month; actual work, 7 hours per day.

Bricklayers, $1.25 per day, working 10 hours.

Brickyard employés—good molders, 97 cents to $1.16 per day by piecework; laborers, 48 to 57 cents per day, working 12 hours.

Butchers—capable men, $19.30 to $38.60 per month, with board and lodging in the shop; second-class men, $9.65 to $15.44 per month, with board and lodging at slaughter-house.

Cab-drivers, 39 cents per day and gifts; work all hours of day and night.

Coal-heavers, 97 cents per day, working 9 hours.

Clothing-cutters, $77.20 per month, working 10 hours per day.

Cooks—male, $28.95 per month and board, working daily from 8 a. m. to 10 p. m.; female, $7.22 per month, with board and lodging, working daily from 6 a. m. to 8 p. m.

Coopers—foremen, $1.27 per day, working 11 hours.

Custom-house deputies—brigadier, $25.09 per month; second brigadier, $23.16 per month; common deputy, $19.30 per month; said wages include lodging alternate nights. Uniforms are supplied, for which $4.25 per month is retained from wages. Service is by order, alternate days and nights.

Farm laborers—male, $5.79 to $6.72 per month and board, working from daylight until dark, and extra for haying and harvest of 39 to 57 cents per day, without board; female

(extra for haying and harvest), 19 to 29 cents per day, without board, and working from daylight until dark. Two hours' rest is allowed, all at noon.

Furniture-makers, $1.16 per day, working 10 hours.

Gardeners—male, 77 cents per day, working 10 hours; female, 29 to 38 cents per day, working 11 hours.

Gas-works employés, 68 cents to $1.16 per day, according to capacity, working 10 hours.

Glove-cutters—male, 58 cents per dozen pairs (if competent, can earn $23.16 to $25.09 per month); female, 35 cents per dozen pairs (if industrious, can earn $7.72 to $9.65 per month).

House carpenters, 97 cents per day, working 10 hours.

Journeymen tailors, 97 cents per day, working 11 hours.

Laborers—excavating cellars, etc., 57 to 68 cents per day, working 10 hours; in shipyards, $1.35 per day, working 10 hours.

Laundresses, 39 cents per day and board, working 12 hours.

Machinists, 97 cents per day, working 10 hours.

Mail-carriers, $19.30 per month, working every day from 5 a. m. to 8 p. m.

Oil-refinery employés, working 11 hours—foremen, $1.27 per day; laborers, 74 to 95 cents per day; carpenters, $1.06 to $1.17 per day; blacksmiths, $1.06 to $1.17 per day; tinsmiths, $1.06 to $1.17 per day.

Painters, $1.17 per day, working 10 hours.

Paper-hangers and decorators, piecework, not fixed.

Plasterers, $1.54 per day, working 10 hours.

Policemen, $23.16 per month, hours by regulation.

Post-office clerks—first year, supernumerary, no pay, working 10 hours per day; second year, $231.60, working 10 hours per day; after which pay increases $57.90 per year until $772 per year is paid, this being maximum.

Railroad employés—engineers, $67.55 per month, according to service; firemen, $28.95 per month, according to service; laborers, $19.30 per month, working 10 hours per day.

Sailmakers, $1.16 per day, working 10 hours.

Servants (female), $1.11 per week, with board, lodging, and washing, working from 6 a. m. to 10 p. m.

Ship carpenters, $1.54 per day, working 10 hours.

Soap manufactory employés—foremen, $1.27 per day, working 11 hours; laborers, from 74 to 95 cents per day, working 11 hours.

Soldiers are paid only as follows, for every 5 days: Privates, 7 cents; corporals, 21 cents; sergeants, 53 cents; quartermasters, 53 cents; sergeant-majors, 97 cents.

Steamship employés (transatlantic), per month—captains, $67.55 to $96.50; first mates, $57.90 to $67.55; second mates, $28.93 to $48.25; chief engineers, $77.20 to $96.50; second and third engineers, $48.25 to $67.55; pursers, $38.60 to $77.20; interpreters, $17.37; second interpreters, $7.72 to $15.44; stewardesses, $7.72; infirmary men, $13.51; first firemen, $21.23 to $23.16; second firemen, $21.23 to $23.16; second-class firemen, $15.44 to $18.34; coal-heavers, $11.58 to $13.51; boatswains, $21.23 to $24.13; carpenters, $19.30 to $23.16; sailmakers, $13.51 to $15.44; seamen (able bodied), $14.48; seamen (ordinary), $7.72; common sailors, $12.55 to $13.51; boys, $4.83; doctors, $57.90 to $77.20. Nearly all steamship employés are not paid during time when ship is at her home port.

Stonecutters, $1.25 per day, working 10 hours.

Street-car conductors, 68 cents per day and 1 per cent. of car's receipts, working from 5 a. m. until midnight.

Street-car drivers, wages, benefit, and time same as conductors.

Street laborers, 39 cents per day, working 10 hours.

Teamsters, $4.83 per week of 6 days, working 12 hours per day.

Teachers, per annum, male—principals, $396 to $589; masters, $231.60 to $308.80; female—preceptresses, $308.80 to $386; schoolmistresses, $193 to $270.20; public school

superintendent, $579. Having attained the age of 55 years, and having been in service 25 years, the teacher is retired on a pension equal to one-half annual wages.

Warehouse laborers, $23.16 per month, working 12 hours per day.

Waiters (male), $6.76 per month, with board, washing, and lodging, working from 8 a. m. until midnight.

Waterworks employés—fountain men, $347.40 per year, working 10 hours per day, and after 25 years' service pensioned on half pay.

Plumbers, $1.35 per day, working 10 hours; apprentices, 87 cents per day, working 10 hours.

FAMILY SUPPLIES IN HAVRE.

[Inclosure 2 in Consul Williams's report.]

Table showing the cost of supplies in Havre.

Articles.	Prices.	Articles.	Prices.
Apples (evaporated):		Tea—Continued.	
For cooking, per pound	$0.21	Black—Continued.	
Skins and cores for cider, do	.07	Cheapest, per pound	$0.54
Beans (white pea), per bushel	2.40	Japan—	
Butter:		Best, do	.54
Prime, per pound	.36	Cheapest, do	.48
Common, do	.27	Turnips, per bushel	$0.31 to .35
Bread:		Straw (prime), per ton	18.94
Best, do	.04½	Tobacco (smoking and chewing), per pound	*1.13
Cheapest, do	.04	Wood (fuel):	
Carrots, per bushel	.23	Elm, per cord	18.00
Cheese, per pound	$0.17½ to .25	Beech, do	14.40
Coffee:		Beef:	
Java—		Steak—	
Raw, do	.38½	Fillet, per pound	.44
Roasted, do	.50	Sirloin, do	.34
Rio—		Entire side—	
Raw, do	.34½	Without leg bones, do	.26
Roasted, do	.42	With leg bones, do	.20
Eggs, per dozen	.14	Kidney, do	.28
Flour (prime), per pound	.05½	Liver, do	.14
Do, per barrel	10.78	Heart, do	.10
Lard, per pound	.11	Head (entire), do	.06
Milk, per quart	.04	Pork:	
Molasses, per gallon	.58	Steak, do	.18
Onions, per bushel	.65	Ham (entire), do	.18
Peas (split), do	3.52	Shoulder (entire), do	.14
Potatoes, do	.68 to .88	Loin, do	.14
Prunes (dried), per pound	.12 to .16	Side, do	.13
Raisins, do	.17½ to .21	Hog (entire), dressed, do	.23
Rice:		Ham (entire), cured, do	.30½
Indo-Chinese, do	.03½ to .04¾	Mutton:	
Carolina, do	.08¾ to .10½	Cutlet—	
Salt:		Trimmed, do	.30
Fine, do	.02¾	Not trimmed, do	.28
Do, per barrel	7.70	Ham—	
Coarse, per pound	.01¾	Without leg bone, do	.27
Do, per barrel	4.90	With leg bone, do	.25
Sugar (white coffee), per pound	.11	Liver, do	.14
Tea:		Head (entire), each	.12
Black—		Feet, do	.03
Best, do	.65		

* A Government monopoly, with but one price for all grades.

Table showing the cost of supplies in Havre—Continued.

Articles.	Prices.	Articles.	Prices.
Veal:		Horse meat—Continued.	
Breast (without bone).per pound..	$0.34	Carcass (entire).....per pound..	$0.05½
Steak.....do...	.25	Coal:	
Cutlet.....do...	.25	Hard native.....per ton..	7.80
Liver.....do...	.30	Soft native.....do...	7.60
Head (entire).....each..	.50	Cardiff.....do...	8.00
Feet.....do...	.08	Charcoal.....do...	28.00
Fish:*		Corn.....per bushel..	.95
Cod (salt).....per pound..	.10½	Hay.....per ton..	$14.50 to 28.00
Salmon (fresh).....do...	.70	Oats.....per bushel..	.70
Horse meat:†		Petroleum (refined).....per gallon..	.36½
Steak.....do...	.15½		

* Other fish sold by lot, dozen, etc.

† After steaks are removed the better parts are made into sausage. Sausages are made, also, from the flesh of donkeys. The steaks and sausages are sold for human consumption; the coarser parts are nearly all sold as food for cats, dogs, and fowls.

The prices above given are, as will be observed, semiwholesale; they are still higher than above quoted when meat is sold in smaller quantities.

THE ELECTRO-TECHNICAL EXHIBITION AT FRANKFORT.

REPORT BY CONSUL-GENERAL MASON.

The International Electro-Technical Exhibition at Frankfort was formally opened on Saturday, May 16, in the presence of the Empress, Finance Minister Miguel, the president of the province of Hesse-Nassau, and a distinguished assemblage.

For various reasons, the exhibition, notwithstanding the utmost efforts of the management and exhibitors, is still in a very incomplete condition, so that the most that can be attempted in this preliminary report will be to indicate what this important and interesting exposition promises to be when the work of preparation and installation shall be complete. It will be remembered that the date originally fixed for the opening of this display was June, 1890, but, as that time approached, it was found that many of the principal exhibitors would be unable to complete their exhibits in season, and by general consent the exhibition was postponed a year. The erection of the necessary buildings was begun in December last, and was greatly retarded by the long, severe winter, which froze the ground to the depth of 1 metre and made the necessary excavations slow and difficult, and by a hurricane which one night in January blew down the framework of the main machinery hall and caused a long and vexatious delay.

The entire exhibition, with its restaurants, refreshment halls, and all other adjuncts, is lodged in new buildings, constructed specially for their present purposes, upon rough, broken ground, which had been previously occupied by railway tracks, and required elaborate and expensive preparation. But, notwithstanding all difficulties and delays, the buildings were practically

ready by May 1 for the reception of exhibits. The fine and extensive display of the imperial post, telegraph, and railway departments, as well as the general telephonic, telegraphic, and telegraphic-supply exhibits, were about the only features that were really complete and ready for the opening. The section most unprepared is the machinery hall, where long rows of ponderous motors and dynamos are being placed into position and put in working order. Of the fifty or more of these machines which are to be exhibited only four or five were in motion on Saturday, so that the exhibition has thus far lost much of its natural brilliancy for want of electricity. These defects are, however, only incidental and temporary. Within a fortnight the exhibition will be in a condition to justify the highest anticipations of its projectors. It will be, beyond all comparison, the most extensive and complete display of its kind that has yet been made in any country. The electrical exhibition of 1882 at Munich employed motors of 160 aggregate horse-power; the Vienna Exhibition of 1883 rose to 1,200 horse-power; at the Paris International Exhibition of 1889 electricity was an important and interesting feature of the large group of industries and applied sciences which were assembled in the vast department of machinery. But the Frankfort Exhibition of 1891 has assembled motors aggregating 4,684 horse-power, and it will demonstate the marvelous march of electrical science by showing what has been achieved during the 2 busy years since the previously unrivaled exhibition at Paris was closed. It opens at a time when the commercial value of electricity for a vast range of scientific and industrial purposes is fully recognized, and it will be among its most important functions to demonstrate the comparative merits of the different motors, dynamos, currents, and lighting systems which now compete for public preference.

The exposition plant comprises nine principal buildings, each of which is devoted to a definite class or department of exhibits, besides numerous smaller constructions, which have been erected by individual exhibitors for special displays. The nine general departments are as follows: (1) The main machinery building for steam and gas engines, dynamos, etc., with annex for steam generators; (2) department of medicine and surgery; (3) telegraphy and telephony; (4) electro-chemistry; (5) railway appliances; (6) electro-galvanism and metallurgy; (7) electric installations and distribution systems; (8) marine station and lighthouse; (9) electrical navigation. Besides these, there is an extensive series of workshops, equipped with electrical appliances for all classes of mechanical work, and an underground department, where will be exhibited various electrical machinery for mining and quarrying. Finally, there is a completely equipped theater, capable of seating several hundred persons, where ballet and other performances will be given each afternoon and evening, with the especial purpose of showing what can be done with electricity in producing dramatic and spectacular effects. The North German Lloyd Steamship Company has on exhibition a large and admirably executed panorama, showing a magnificent view of the harbor and city of New York as seen from the deck of an incoming steamer

of that line, and the Hamburg-American Steamship Company exhibits a captive balloon, bearing aloft in gigantic letters the legend of its fastest steamer's quickest run from Hamburg to New York.

The exhibition has brought into friendly rivalry four hundred and ninety-three exhibitors, many of whom are great manufacturing firms or corporations like Siemens & Halske, of Berlin, or the Thomson-Houston International Company, of Boston, each of which has numerous exhibits in several different departments. The first hundred competitors on the list are in the department of technical drawings, which will be ready for opening on the 1st of June; the remaining three hundred and ninety-three are divided among the various departments already designated. Many of the leading manufacturers have exhibits ranging in number from ten to a hundred or more, distributed under their respective classes in several different departments. Naturally a large majority of the exhibitors are of German nationality, and the range and quality of their products in this field of manufacture will be a revelation to those who remember the exhibitions at Munich and Vienna and the meager show that the Fatherland made at Paris in 1889.

Next in order of numbers comes Austria, then Great Britain, the United States, Switzerland, Italy, Russia, and France, the three latter countries being rather slenderly represented.

THE AMERICAN DISPLAY.

The American display is, perhaps, less extensive and varied than might have been expected from a people so prominent as ours in all that pertains to electro-technology, but it has this distinct and important characteristic—it all means something. Nearly everything of American origin at this exhibition is unique, and represents a new idea. There is no piling up of goods simply to make a show of quantity or elegance of finish; each exhibit is original and different from everything else at the exhibition. There are, of course, numerous small articles and materials of American origin which are exhibited by German agents and importers under their own names, and can not readily be distinguished from similar products of local manufacture. The distinctively American exhibitors and the articles which they present are as follows: Otis Bros., New York, Otis electric elevator; Babcock & Wilcox Company, New York, tubular safety boiler; American Link Belt Company, New York, link belting; Edison United Phonograph Company, Edison's phonographs, worked by battery, accumulator, and machine currents; Weston Electrical Instrument Company, Newark, N. J., measuring instruments; Singer Sewing Machine Company, sewing machines, with electric motors; and the Thomson-Houston International Electric Company, with nine exhibits in four departments. These include principally an electric power generator, an arc-light machine, two electric drilling machines for mines, a dynamo motor of 50 horse-power, a force pump, an electro-magnet of 2,000 pounds lifting power, and an electric windlass for drawing cars up an inclined plane from a mine. Other trans-

atlantic features are a special pavilion for the sale of California wines and the inevitable "American bar," which has figured more or less prominently at the European exhibitions during the past 20 years. Ocean telegraphy is represented chiefly by the Eastern Telegraph Company, of London, with an interesting display of cables and instruments, which illustrate very perfectly the progress that has been made in cable laying and working since the first wire was laid across the Atlantic. This, so far as can be seen, is the only exhibit in that department which is of a historical character, and it is to be regretted that some leading American company like the Western Union could not have shown a series of instruments from the time of Morse to that of Edison which would illustrate what American inventors have contributed to the development of practical telegraphy. As it is, the one thoroughly popular feature from our country is the phonograph, which, however, easily holds the first place as an object of general amusement and interest.

Very few, comparatively, of the visitors who throng such an Exhibition know or care much about volts, ampères, or the comparative merits of arc and incandescent lights, but everyone understands and enjoys the marvelous witchery of the phonograph and the long-distance telephone. Special rooms are fitted up with telephonic communication with the opera houses at Munich and with the Kursaal at Wiesbaden, so that the daily performances at those places are enjoyed by wondering audiences at the Frankfort Exhibition.

It has been stated in previous reports on the present topic that this exposition of 1891 is expected to furnish some definite conclusions upon two points of extraordinary practical interest, viz, the comparative merits of all the known methods of electric propulsion for railway cars, with the storage system, upon which the use of electric power for marine purposes mainly depends, and, finally, the problem of long-distance transmission of electric energy. The first comprises the whole subject of production, storage, and distribution of electric energy—in short, a comparison of the several competing systems, which will here be brought into open rivalry under the eyes of an international jury of the highest authority and competence. There are hundreds of municipalities, street railway companies, and manufacturing firms in Germany which are on the point of adopting electricity for motive or illuminating purposes and are waiting for the result of this competition before deciding where to place their contracts. The verdict of this trial will make the fortunes of the successful contestants.

The feasibility of long-distance transmission will be demonstrated, unless all anticipations fail, by the working of a powerful current generated by water-power at Lauffen, on the River Neckar, and conveyed to the exposition, a distance of something more than 100 miles. The plant for this important undertaking is now in process of construction. The problem is mainly one of insulation—whether a current of such intensity can be conveyed so great a distance without being fatally dissipated and weakened by loss through imperfect insulation. There is, however, a very general feeling of confidence that the experiment will succeed, and it is expected that the German Empe-

ror, who has shown such generous sympathy with all the purposes of this exhibition, will be present on the 15th of August to set this new wonder in motion.

When it is considered what the success of this venture will mean—the harnessing of the now wasted water power of all civilized countries to the every-day work of life and the immense saving of money, fuel, and labor that would thereby be rendered possible—it is not too much to hope, if not expect, that the exposition which has just been opened in this bright, enterprising German city will leave an important mark upon the industrial progress of our time.

FRANK H. MASON,
Consul.

UNITED STATES CONSULATE,
Frankfort, May 19, 1891.

SWISS FACTORY OPERATIVES.

REPORT BY CONSUL CATLIN, OF ZURICH.

It appears from the annual report of the federal department of industry and agriculture for the year 1890, just published, that on the 31st of December last there were in operation in Switzerland, under the provisions of the law pertaining to factories, 4,223 establishments with 88,000 horse-power, employing 170,000 operatives. The cantons principally concerned show the following number of establishments and operatives respectively, viz:

Cantons.	Operatives.	Establishments.
	Number.	*Number.*
Zurich	37,809	712
St. Gall	20,770	853
Bern	17,271	387
Aargau	16,628	338
Basel	11,399	180
Soleure	9,598	109
Thurgau	9,329	363
Glarus	8,637	104
Vaud	6,424	193
Others	32,135	984
Total	170,000	4,223.

Zurich, it will thus be seen, contains within its limits 22.3 per cent. of all the factory operatives in Switzerland and nearly double the number of those employed in St. Gall, the next on the list.

During the year no less than 3,866 official visits of inspection were made by factory inspectors.

GEORGE L. CATLIN,
Consul.

UNITED STATES CONSULATE,
Zurich, May 9, 1891.

SEA FISHERIES OF GREAT BRITAIN.

REPORT BY CONSUL BRUCE, OF LEITH.

The following statistics of the sea fisheries of the United Kingdom for the year 1890, with comparison of the figures for the 5 previous years, have been issued in a Parliamentary paper. Attached to the tables, which include the returns of the quantity of fish conveyed inland from each of the principal ports during the years 1885–'90, inclusive, is a memorandum summarizing the results. It says the broad fact brought out by the primary return as to fish landed on the coasts of England and Wales, with which the board of trade has to deal, is that the quantity so landed last year, exclusive of shellfish, amounted to 6,100,000 cwts., or, say, 305,000 tons, of the value of £4,369,000, which, with the addition of the shellfish, having a value of £374,000, makes a total of £4,743,000. These figures show a considerable increase in the values over previous years, the values in 1888 and 1889, respectively, having been £4,213,000 and £4,169,000. There are also some changes in the places where the fish have been landed and in the importance of the several kinds of fish, which will afterwards be noticed. The corresponding figures for Scotland show a total quantity of 5,362,000 cwts. landed, exclusive of shellfish, valued at £1,560,000, and the total value, including shellfish, £1,627,000. The corresponding figures for Ireland show a total of 799,000 cwts. landed, exclusive of shellfish, valued at £363,000, the value, including shellfish, being £374,000. In the case of Scotland the total values show an increase over the previous years, as they do in England and Wales, although in both cases there is a decrease in the quantity landed. In the case of Ireland there is also a considerable increase in value, viz, from £334,000 in 1889 to £374,000 in 1890, and here also we have to observe the same proportional decrease in the quantities landed. The aggregate result for the United Kingdom is a total of 12,261,000 cwts. landed, exclusive of shellfish, or, say, 613,000 tons, valued at £6,291,000 at the point of landing. Adding to this the value of shellfish, amounting to £453,000, we arrive at the sum of £6,744,000, or, in round figures, £6,750,000, as the return of the sea fisheries of the United Kingdom, as valued at the place of landing, in the year 1890. Making an addition for the annual values of Scottish and Irish salmon, according to the returns of 1889, which are the latest available, the above totals should be increased by £222,000 for Scotland and £399,000 for Ireland, and a smaller, though still considerable, addition would have to be made for England, bringing up the total annual return of the sea fisheries of the United Kingdom, with the addition of the salmon fisheries, which are in a special category, to over £7,000,000.

WALLACE BRUCE,
Consul.

UNITED STATES CONSULATE,
Leith, April 24, 1891.

BERLIN POOR COMMISSION.

REPORT BY CONSUL-GENERAL EDWARDS.

The following institutions are at present under the control of the Berlin municipal commissioners of the poor: (1) The hospital at Friedrichshain, (2) the Moabite Hospital, (3) the infirmary on the Prenslauer Allee, (4) the Frederick William Hospital, (5) the new hospital in Danziger street, (6) the insane asylum and the home for epileptics in Dalldorf, (7) the orphan asylum in Rummelsburg and the orphan depot in Old Jacob street, (8) the workhouse and workhouse hospital in Rummelsburg, (9) the municipal asylum for the homeless in Danziger street, and (10) the reform school for children in Rummelsburg.

These institutions are severally managed by directors or inspectors, under the supervision of mixed deputations. For institutions 1, 2, and 6 the deputations are called *Curatoria*, and are comprised of members of the public sanitary commission; for 3, 4, and 5, the *Curatoria* are elected by the magistracy and city council; 7 and 10 are under the supervision of the orphan department of the poor commission; 8 and 9 are under the direct supervision of the workhouse commissioners.

The following table shows the expenses incurred in the maintenance of these institutions:

Year.	Population.	Expenses.		
		Maintenance of poor institutions.	For the assistance of the poor outside of institutions.	Total.
		Marks.	*Marks.*	*Marks.*
1882–'83	1,162,857	4,092,711.72	3,231,960.52	7,234,672.24
1883–'84	1,197,299	4,310,797.75	3,362,203.24	7,673,000.99
1884–'85	1,233,823	4,539,923.74	3,432,436.41	7,972,360.15
1885–'86	1,284,334	4,520,931.75	3,587,679.69	8,108,611.44
1886–'87	1,327,162	4,794,524.57	3,728,458,25	8,522,982.82
1887–'88	1,399,755	4,939,696.78	3,855,790.73	8,795,487.51
1888–'89	1,453,693	5,162,818.44	4,014,801.09	9,176,619.53

W. H. EDWARDS,
Consul-General.

UNITED STATES CONSULATE-GENERAL,
Berlin, May 4, 1891.

MANUFACTURE OF CONGLOMERATE FUEL IN FRANCE.

REPORT BY CONSUL WILLIAMS, OF ROUEN.

INTRODUCTORY.

The mechanical preparation of fuel has proved an important factor in the development of the coal industry of France.

In 1820 the production was 1,000,000 tons, which increased to 24,000,000 in 1889. The French coal is inferior in quality to the English, being less pure and more friable, and, therefore, the profitable use of the fine refuse coal has always been an object of great importance in the working of the coal mines.

During the first part of the century the fine refuse coal, especially that which was less inflammable, was not used, but was left at the bottom of the mine. Creusot used the fine anthracite for ballast on a railroad that he was constructing; the same use was made of it in England, but the English mines furnished a greater proportion of large pieces, for which they obtained a fair price, and the use of very small coal was but an accessory. In 1842 Marsais invented and set up the first machine to conglomerate, which worked in a satisfactory manner. With this machine they could utilize all the fine coal and dust, making a fuel of first quality, particularly advantageous for use on vessels and railroads. Different sorts of machines were invented, and everywhere manufactories for the making of "briquettes" were established near the coal mines.

The question was raised if it was any real advantage to thus utilize the refuse, or if it could be burnt as profitably in its natural state without increasing the net cost 5 to 8 francs per ton. One advantage claimed for the briquettes is that they do not deteriorate like the dust when piled up, the handling and storage of them is much easier, and they take up at least 10 per cent. less space. It is quite certain that for the use of steamboats the briquettes are by far the best fuel yet discovered; they burn more freely, can be handled by an ordinary stoker, and they give most excellent results, whereas the dust alone was almost worthless. They will always be popular for small industries and for domestic use. In the large industries, notably the railroads, this use of the refuse fine coal and dust has, for the last 12 years, been almost universal in France.

CONGLOMERATE FUEL.

The first experiment tried in the making of conglomerate fuel was by Baroulier, who tried grinding the fine coal and forming a compact paste without using any cement; it was a failure. Many other ways were tried, but proved unsuccessful. Common black pitch proved to be the only conglomerant practicable for universal use. It has the greatest adhesive power, is in itself heat-producing and burns well, lessens the amount of ashes, permits of checking the yield of volatile substances in poor coal, makes it a fuel burning well, and conglomerates when burning with the coal, while without the pitch it would turn to ashes when heated and be of no use.

Pitch is the residuum of the distillation of coal tar. For the manufacture of briquettes it must have the following qualities to render it suitable:

It should be hard enough, at an ordinary temperature, to be transported in bulk. In breaking it should present a black and glossy surface, not greasy or stickey to the touch, and should have a strong odor of coal tar. Thrown into water at 75° C., it should admit of being drawn out in long, fine threads without breaking. If it does not give longer threads than 30 to 50 centimetres, it is of inferior quality. In calcination it should give from 45 to 52 per cent. of swollen coke and very hard; incineration should yield one-half of 1 per cent. of ashes. It should be the result of distillation of coal tar, and must be free from any residuum of the rectification of petroleum or mineral oil.

The most exact, as well as the most simple, system of testing the quality of pitch is to put a small piece in the mouth; if too dry, it pulverizes when bitten, while the good softens and becomes easy to work. At Port-du-Buc they test the quality of the pitch by grinding a small quantity and putting it in a crucible heated in a water bath over a spirit lamp. They test the fusion by sounding with an iron needle. At 40° C. it softens, at 60° it is soft enough to thrust an iron needle into it, at 70° it can be drawn into short threads, at 75° the threads should be half a yard long, at 80° to 85° they should be more than a yard long, and at 90° the fusion is finished.

The quality of the pitch depends upon the use to which it is to be applied, the pressing machines, the heating apparatus, and the kind of coal used. The testing should, when possible, be made by the same person and one having a practical knowledge of the work.

PRICE OF PITCH.

The price of pitch follows the price of coal. England supplies a large quantity to France. When the demand for fuel is brisk the manufacture of conglomerate fuel increases, and the price of pitch is raised. It is also influenced by freight. It is really the price of English pitch in France that regulates the market.

Table showing the cost of coal and pitch per ton.

Year.	Coal.	Pitch.
	Francs.	*Francs.*
1873	18.09	54.00
1874	18.78	51.00
1875	18.87	50.00
1876	17.00	55.00
1877	14.00	59.50
1878	13.14	57.00
1879	12.65	53.00
1880	11.88	44.00
1881	11.77	42.00
1882	11.86	51.00
1883	12.00	53.00
1884	11.57	56.00
1885	10.39	48.00
1886	10.00	39.00
1887	9.60	34.00
1888	9.30	38.00

PITCH COAL.

Cohesion.—The machinery for measuring the cohesion is a sheet-iron cylinder, with three diametrical partitions. It has a door made to turn on itself, or by means of a crank, for the admission of the materials. For testing, they put in 50 kilogrammes of briquettes in blocks of 500 grammes each. The cylinder is then closed and made to revolve for 2 minutes with a uniform movement of twenty-five turns per minute, after which the blocks are removed from the cylinder and shaken on an iron plate perforated with square holes of 3 centimetres aslant. The difference in the weight of the blocks before and after the firing gives the amount of cohesion. This machine was adopted by the French navy, which exacts a cohesion of 52 per cent.; it also requires that the briquettes shall not soften at a temperature of 60° C. The briquettes for the use of torpedo boats should have a cohesion of 58 per cent. In the trials made by this machine it is necessary that the rotation should be uniform, for the same number of revolutions (fifty) made in different lengths of time do not give the same result; for instance, briquettes having a cohesion of 56 per cent. with a normal revolution have but 40 per cent. if the fifty revolutions are made in 3 minutes instead of 2, and 86 per cent. if they are made in 70 seconds.

The cohesion of the briquettes depends on the different elements of which they are composed. The quality of the pitch is of the utmost importance; the other conditions being equal, the cohesion diminishes one-half with poor pitch. The use of liquid pitch has the advantage of giving perfect control of the quality of the pitch and of always giving the same results. The solidity of the briquette increases with the proportion of pitch used. There is usually a proportion of pitch for which the solidity is maximum; but it is not necessary to go as far as that, for the proportion depends on the use for which the fuel is intended.

APPARATUS.

A factory for the conglomeration of coal dust requires (1) steam generators, (2) an engine, (3) a crusher for coal (in some cases useless) or a dry steam apparatus, (4) a crusher of pitch or large kettles for melting pitch, (5) a meter for pitch and coal to determine the proportions, (6) machines for mixing and heating, (7) the press for conglomerating, and (8) an endless canvas for cooling, moving, and changing the briquettes.

Steam generator.—Any style can be used. When a washhouse is close by a factory for conglomeration, the residuum from the washings, as slime, schists, etc., can be utilized for fuel.

Allowance must usually be made for a heating surface of 15 square metres for the manufacture of a ton of briquettes per hour. The amount of fuel depends upon the perfection of the machine and whether the heating is done by a furnace or by utilizing the steam from the generators. It is by this last means that the maximum is obtained. The heating surface amounts to 25 square metres at the factory of St. Waast, with the Bietrix presses and pug mill, the steam for which comes directly from the boilers. The consumption

of fuel per ton of conglomerates is generally from 50 to 60 kilogrammes, and it sometimes runs as low as 20 kilogrammes.

The engine.—Any ordinary engine can be used, but it must have a regulator, worked by a belt, to prevent ruptures in case of any solid body entering into the presses or pug mills. The motive power varies with the different systems adopted, and may be rated at from 4 to 8 horse-power for the manufacture of 1 ton per hour.

Crushing and drying machines.—When furnaces are used for heating the paste, the drying is done at the same time. The presence of water diminishes the production of the furnace, and allowance must be made for it to obtain a given result. When not wishing to use the furnace and there is an excess of water, it becomes necessary to use a particular machine, and one of the best is the hydro-extractor of Hanrez. It requires 6 horse-power, makes from 300 to 350 revolutions per minute, and can turn out 50 tons every 12 hours.

At Lagnieres, with an oven of 1.50 by 7 metres, costing 7,000 francs, the following results were obtained: In 10 hours the furnace treated 60 tons of washed coal, which, when placed in the oven, contained 6.5 per cent. of humidity in winter and 5.6 per cent. in summer. When taken out it had lost 3 per cent. of water. The amount of fuel used was 1,000 kilogrammes, 1.65 per cent. of the weight of the briquettes. When taken from the furnace the coal still held 3.5 per cent. of water. This proportion was reduced to 1.7 or 1.8 per cent. by passing it through two pug mills successively. These pug mills are in an atmosphere of steam and receive injections of steam heated to 300° C. The steam is superheated in a serpentine tube with 14 square metres of heating surface. The furnace consumes 500 kilogrammes per day, or 0.83 per cent. of the production. Between the pug mills is placed a horizontal arrangement for moving the paste, which must assist in drying it. This machine works on dry pitch, which is added to the coal when it comes out of the furnace and before it enters the pug mill.

GRINDING COAL.

To obtain good cohesion, the coal must have pitch in proportion to its fineness. With very fine coal and a good deal of pitch the conglomerate is very firm; but the coal can be too fine for working profitably. About 20 per cent. of pitch is required to conglomerate the slime from washings.

The machine used for grinding in the factory at St. Waast is 1.20 metres in diameter and 0.38 metre in width. It makes 300 turns per minute. Each machine requires 25 horse-power and treats 15 tons per hour.

TEMPERATURE OF THE PASTE.

If the paste is not sufficiently heated the pitch does not thoroughly mix, and there is no cohesion. The heat should be sufficient for the fusion of the pitch throughout the mass. A certain amount of water facilitates the heating, as coal is a bad conductor. But at the moment of pressure, or when

removing from the molds, it requires less heat, or the cohesion of the briquette will be weak and it will break readily. When each grain is enveloped in pitch, it is unnecessary to maintain the temperature of fusion, that of the condition of paste being enough. The temperature of the paste in the molds should be 80° to 85°, and never as high as 90°, but it can descend to 70°.

AGGLOMERATION PRESSES.

In 1861 the machine of Everad for the agglomeration of coal dust was brought into use. In 1862 it was improved, and in 1864 it was adapted to the manufacture of what is termed *charbon de Paris* (Parisian charcoal), manufactured from coke at nearly all of the gas works in France, and is by no means a bad substitute for that article for fires and cooking in summer.

Then followed, in 1873, the system of Girard. A machine for making briquettes was invented by Durand and Marais in 1880 and improved in 1882. In 1884 the double-pressure system of Conffinhal was invented.

After carefully examining all of these systems, I find that they have much merit, and are profitably employed in manufacturing in mines and centers from which briquettes can be distributed. They deserve the attention and study of any person desirous of undertaking the manufacture of briquettes.

The Paris, Lyons, and Mediterranean Railroad Company exhibited at the late exposition at Paris a machine for agglomeration of a new type, invented by A. Henry, chief engineer of construction. This machine, adapted to manufacture large and small briquettes, offers the advantage of the greatest cohesion with the least proportion of agglomerating material.

GENERAL CONSIDERATIONS.

To manufacture conglomerated fuel of great tenacity while using a small proportion of cohesive material, excessive pressure is indispensable. This can not be effected with bottomless cylindrical or prismatical molds, in which the pressure is obtained by the friction of the paste in the mold, because, as soon as the mixture becomes too dry, the friction becomes such that the machine stops or breaks.

Recourse, then, must be made to closed molds. Until now these have been but little used for the manufacture of large cake fuel, which must be broken before being put on the fire. This was a great task when it was required to feed the furnaces of a locomotive, besides making a considerable proportion of dust. To make small briquettes ready for use for domestic purposes, locomotives, etc., without breaking, the large, closed molds have been partitioned off so as to make a certain number of small briquettes in place of a large one; but the capacity of production has been thus reduced, and the weight has been brought down to about 600 grammes, whereas it is necessary to feed locomotives with those of 250 to 300 grammes, and, in many instances, even less. Another disadvantage arising from the small molds replacing the large ones was that they could not be filled at the same time; the compressing pistons having all the same direction, the small cakes made

in this way were not uniformly cohesive, and sometimes not at all so. Henry studied to avoid these faults and to produce, with mixtures dry and poor in cohesive properties, briquettes as light as 200 grammes, having a strong and regular cohesiveness and turning out a considerable quantity relatively to the weight of the machine.

DRYING AND STORAGE OF BRIQUETTES.

Briquettes are sometimes loaded upon wagons as soon as they leave the press, and are sometimes placed upon an elevated platform; in the latter case the breakage is considerable, because they come warm from the molds and are only partially solid. They attain their normal cohesion after cooling and losing by evaporation their excess of water. The danger of breakage is diminished by cooling the cakes before handling; for this purpose they are placed on an endless apron, moving slowly, of sufficient length to affect their temperature, which carries them to an inclined plane, over which they slide to the workmen, who carry them away. These aprons are of aloe wood 20 millimetres in thickness; their speed, 15 to 20 centimetres per second.

COAL FOR CONGLOMERATION.

All kinds of coal can be conglomerated; that containing 13 to 17 per cent. of volatile matter is preferable.

Certain of the coals of the Franco-Belgian basin containing only 12 to 14 per cent. of volatile matter make good briquettes by using 9 to 10 per cent. of pitch. When the coal contains but 9 to 10 per cent. of volatile matter, the briquettes burn slowly and with difficulty. The cohesion, when cold, is as great as with any other coal; but in the fire the fuel does not burn as freely as the briquettes of half-volatile coal. If the proportion of pitch is insufficient, it gives a sort of coke ready to turn into dust.

If a certain amount of caking coal is mixed with the less inflammable coal, a good fuel, strongly cohesive, is obtained, without an excessive use of pitch.

Lignites alone are difficult to conglomerate, but mixed with other combustibles they give good results. At the works of Port-de-Buc the moderately inflammable coal of Gard, the anthracite of Cesson, and the lignite of Fuveau (the latter in the proportion of 10 per cent.) are mixed together. The briquettes have 19 per cent. of volatile matter, 8½ per cent. of pitch, and a cohesion of 60 to 70 per cent.

At Aarau, in Switzerland, turf and anthracite are mixed with tar. The briquettes are 7 centimetres in thickness and 9 centimetres in diameter; weight, 700 grammes. The production is thirty thousand briquettes per day. The pressure used on this mixture in the molds is 30 tons.

HOLLOW BRIQUETTES.

Hollow briquettes are made from the residue of washing.

A company at Blanzy in 1875 put in a small machine to utilize the stone from their washings, which was very impure and argillaceous, con-

taining 35 per cent. of argil and very little sand. The argil serves as a conglomerating material, and admits of the addition of sawdust, producing a fuel which does not burn freely except in special furnaces. After drawing off the slime, 6 to 8 per cent. in weight, equal to about 21 to 27 per cent. in volume, is mixed in a rolling mill with fluted cylinders, and then in a pug mill 90 centimetres in diameter and 30 centimetres in height, below which are two presses. Each press has a horizontal piston moved by a crank of 23 by 19 centimetres, which forces out the paste through a guage plate, which divides it into two hollow rolls. These pistons traverse 35 centimetres and give 10 strokes per minute. The roll is cut by hand into pieces weighing 1½ kilogrammes. Fifteen thousand briquettes are manufactured in 11 hours at a cost of 3.50 to 4 francs per ton. The cost of this machine, without the engine, was 40,000 francs.

AGGLOMERATION OF COKE DUST.

A large proportion of the gas works manufacture briquettes from the coke dust and tar or pitch produced from the coal. These are manufactured on a large scale by some gas companies, notably the Parisian, which makes and consumes in its own furnaces 120 tons per day.

PERFORATED BRIQUETTES.

Perforated briquettes are manufactured extensively at Paris, as well as at Rouen, Calais, and other French cities. They are used for domestic purposes, principally on grate fires. These perforations, usually nine in number, tend to enliven a sluggish fire, acting as so many flues, through which the flame is drawn upwards. Their weight is 1 kilogramme, and the cost to consumers 5 francs per 100. Speaking from experience, within a certain limit there is no more useful, economical, and agreeable fuel for use in some grates. Their consumption is enormous, and is constantly increasing.

COST OF CONGLOMERATE FUEL.

The cost of conglomerate fuel depends upon (1) the coal used; (2) the cost of manufacturing, hand labor, and repairs; and (3) the price of pitch.

The price of coal varies according to where the supply is obtained, the season of the year, and whether the coal is washed or not. Very few of the French mines supply coal that can be used without being washed. The tenure of ashes required by the railroads and navy is 6 to 8 per cent.; for the factories and for domestic use, rarely more than 10 to 12 per cent. It is necessary to wash the fine coal, and that increases the expense, both on account of the waste and the price of labor.

The cost of manufacture also varies, according to the size of the factory and the machinery used. Twenty-five years ago most of the work was done by hand, and the expense was great, but to-day machinery has taken the place of hand labor, and by the use of simple and strong machinery the expense is lessened.

The hand labor costs from 60 centimes to 1.10 francs per ton, and includes the unloading of the coal and loading of the briquettes. The most

delicate and the most important machine is the press; it should be strong. A poor one costs more to keep in order, and so does away with the profit.

The cost of manufacture in northern France is as follows:

Table showing the cost of manufacture in a factory using two Bietrix presses and making 250 tons per day, working 24 hours.

Description.	Amount.	Description.	Amount.
Manual labor.	*Francs.*	*Supplies.*	*Francs.*
Superintendence	0.04	Oils and grease	0.09
Truckmen	.03	Sundries	.07
Handling of pitch	.05	Repairs	.10
Handling of coal	.06	Coal for engine and furnace (at 6 francs per ton)	.31
Grinding	.17	Total	.57
Manufacturing	.21	Grand total	*1.37
Loading briquettes	.08		
Sundries	.06		
Stokers	.10		
Total	.80		

* Evidently per ton.

Table showing the cost of manufacture in a factory using four hydraulic Revollier presses, with a revolving plate, producing 60 to 65 tons, using dry pitch, steam heat.

Description.	Amount.	Description.	Amount.
Manual labor.	*Francs.*	*Supplies.*	*Francs.*
Superintendence	0.06	Oils and grease	0.11
Truckmen	.06	Wood and metal	.07
Handling of pitch	.05	Horses for carts	.07
Handling of coal	.11	Sundries	.15
Grinding	.08	Repairs	.40
Manufacturing	.42	Coal for boilers	.35
Loading briquettes	.08	Total	1.15
Stokers	.20	Grand total	*2.21
Total	1.06		

* Evidently per ton.

In 1876 the cost of manufacture at Chasse with the Everad machine was as follows:

	Francs.
Manual labor	0.9584
Men regularly employed	.1032
Cost of repairs	.1286
Total	1.1902

COST OF PITCH.

The principal item in the cost of briquettes is pitch. This varies with the location of the works and the amount used. A large portion of the pitch used in France is brought from England. Works placed on the seashore and favorably situated obtain supplies at a moderate price, often as low as 30 francs per ton.

From the foregoing prices, quoted as the minimum and maximum prices of pitch, the following figures will denote the cost of conglomeration:

For the minimum, taking 6 per cent. of pitch at 30 francs per ton, 1.80 francs; hand and machine labor, 1.50 francs; total, 3.30 francs. This is a theoretical cost price. The works on the seashore generally supply the navy, and use 8 per cent. of pitch to obtain a firmer cohesion. The cost, then, would be 3.90 francs.

For the maximum, taking 9 per cent. of pitch at 70 francs per ton, 6.30 francs; hand and machine labor, 2.50 francs; total, 8.80 francs. This should never be exceeded in any well-regulated works.

COST OF ESTABLISHING WORKS.

The cost of a press with a pug mill varies, according to the type and construction, from 13,000 to 26,000 francs for a machine manufacturing 60 tons per day. The other accessories, such as the engine, foundation, etc., mount up to about 150,000 francs. A machine which turns out 60 tons per day was constructed under a simple shed at Paris for 70,000 francs.

A complete factory often contains wash buddles for cleansing the coal for briquettes. Such is the case in an establishment at the north arranged for manufacturing 220 tons every 24 hours, which contains a double-action Bouriez press, a Corliss engine of 50 horse-power, four improved boilers, and eight washing vats, treating 640 tons of rough dust every 24 hours. One-third of the refuse is in the form of schist, which is thrown out, and of slime burnt in the furnaces; one-third of the product is sold outside, and one-third submitted to the Bouriez press. The total cost of the mill, built in 1881, including iron track, storehouses, stable, smith shop, woodwork, scales, ten horses for employés, hoisting engine, locomotive, and four cars, was 700,000 francs, exclusive of the land.

THE MAZELINE MACHINE.

Fig. 2 (Exhibit A) is a drawing of a double-acting Mazeline machine, with one hopper for distribution. It can turn out 24 tons per hour of briquettes weighing 10 kilogrammes each. The output is twenty briquettes per minute for the single machine and forty for the double.

The machine consists of a revolving frame carrying a certain number of molds of deep, hollow vessels for molding, each one furnished with a plunger placed at the lower part and serving for molding the briquettes and removing them from the molds. Each piston places itself in turn for the pressure upon a lever, which receives direct motion from a steam piston placed above the turning frame, and the connecting rod of which is in the axis of the frame. Steam is introduced under the piston, which has a large diameter and a light length of stroke. The distribution is made by a small slide moved by one of the arbors of the driving gear of the rotatory motion of the frame. The pressure lasts a certain length of time, and when the machine moves slowly the excess of water in the paste can be expelled.

The Belleville springs R R, represented in Fig. 1 (Exhibit A), serve to deaden the shocks. By their use a pressure of 300 kilogrammes per square centimetre of briquette can be obtained, instead of 100 kilogrammes by the old system.

The waste of steam is very great with this machine, and the revolving apparatus requires frequent repairs. The machine is simple in construction and costs comparatively little.

The machine used at Rouen is a single press with 11 molds of feeble pressure, producing about 8 tons per hour of briquettes of 180 by 140 by 250 millimetres, weighing 7 to 8 kilogrammes each. About 8 per cent. of dry pitch is used. The coal dust comes from the Anzin mine in the north of France, and costs 27 francs per ton; pitch costs 54 francs per ton. Fourteen men are employed in each gang for a product of 160 tons in 24 hours.

The cost of manufacture per ton is as follows:

	Francs.
Pitch	4.50
Labor	1.00
Repairs	.20
Sundries	.16
Total	5.86

The cost of the machine was 35,000 francs. The engine, boilers, mixing machines, buildings, all of which are ordinary, cost about 50,000 francs. The coal dust used in these works is not washed.

THE PARIS RAILWAY COMPANY'S MACHINE.

This machine was made by the Paris, Lyons, and Mediterranean Railway Company for making coal bricks (briquettes) for fuel of 250 grammes weight each. The complete machine is composed of a number of similar machines, or elements, placed side by side, and each element has two molds for making the briquettes.

Figs. 1 and 3 (Exhibit B) are an elevation and plan of a machine composed of two elements and four molds.

In Fig. 1 the two molds A A are shown in sections, and they, it will be seen, consist of a cast-iron cylinder open at both ends, and at its center there is a vertical funnel-shaped hopper, through which the coal mixture is fed into the mold. Into one end of the mold the compressing plunger C, driven by the eccentric D, works; the other end is alternately closed and opened by a plug E. This plug E is worked by the cam F, of such a form that the mold remains closed during the compression of the mixture, and it is then suddenly opened, and the compressing plunger, continuing its movement onward, pushes out the finished briquette. The two outer shafts carry the two eccentrics and the inner middle shaft the cam. The three shafts work at equal speed and together, being driven by the three large spur wheels H, G, and N. These spur wheels are driven by a shaft K and pulley J (Fig. 2). On the shaft K there is a fly wheel M.

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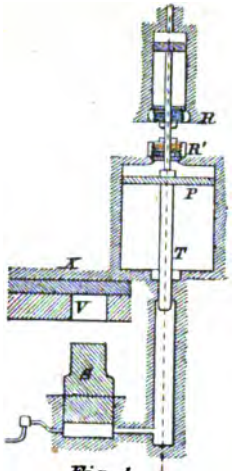


Fig. 1.

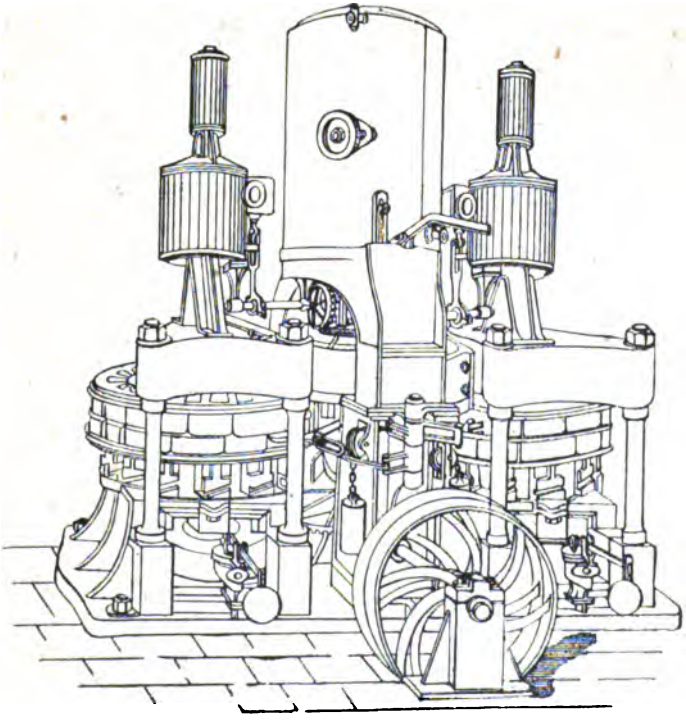


Fig. 2.

EXHIBIT A.

The cam F, on the inside shaft, serves for both the molds to the right and left of it. In the position shown by Fig. 1 the mold A, on the left hand side, has been filled with the coal mixture, and the compression plunger, moving onwards, will first close the feeding hopper and then compress the mixture against the plug E. In Fig. 4 the compression is finished and the briquette formed. In Fig. 5 the plug E has been withdrawn by the cam and the compression plunger has pushed the briquette out.

From the position shown in Fig. 5 to the position shown in Fig. 1 the machinery must make a half revolution, during which time the plug E returns and closes the mold, and the compressing plunger returns to the position uncovering the feed hopper, permitting a fresh charge of mixture to enter the mold. During this return movement, while the mold on the left is getting filled, the mold to the right has made a briquette, and so, in each alternate half revolution, one mold is being charged while the other is being compressed. These two molds form an element of the machine, and it is clear that several elements can be placed side by side. The machine illustrated has two elements. The eccentrics, in the case of a machine of several elements, would be fixed on the shafts to divide, as much as possible, the resistance, and so prevent the shafts having to compress several briquettes at the same time. The plate is very complete, and gives the more important details on a larger scale with full dimensions in millimetres.

The machine is made to compress the briquettes to 300 kilogrammes per square centimetre (4,200 pounds per square inch), and this pressure is assured by the following simple contrivance: It will be noticed in Fig. 4 that plug E fits into a hole bored into the stem S. Between the end of the stem S and a collar on the plug E there are shown six steel disked washers (Belleville springs) that are calculated and proved to give way or compress only when the pressure of 4,200 pounds per square inch is attained, and it is so arranged that the pressure exerted compresses the springs each time.

The length of the finished coal briquette of 250 grammes weight is 50 millimetres (1.96 inches), but the space left is only 40 millimetres (1.57 inches), and so at each operation the springs have to give way to make the difference between 1.96 and 1.57 inches (0.39 inch) before the plug E is removed by the cam; and, therefore, the briquettes are subjected at each operation during the compression of the springs to the pressure of 4,200 pounds per square inch.

The amount of coal mixture fed into the hopper and mold at each operation is regulated by the slide shown on a larger scale in Figs. 6–9. The slide O (Fig. 1) is connected to the eccentric frame and works in unison with the compression piston. Each time the space O (Figs. 6–9) comes under the upper hopper P it is filled with the coal mixture contained in P, and when O comes over the feed hopper B it empties itself into B and the mold A. The amount fed at each operation depends on the volume of the space O, and this space can be varied by the screw R, shown in Figs. 7, 8, and 9. The amount of mixture necessary at each charge varies with the amount of pitch used, the amount of humidity, and with the pressure neces-

sary to compress the Belleville springs. In Figs. 6–9 a small screw *a b* is shown; the head of the compression plunger strikes *b* each time it arrives at the end of its stroke and shoves it outwards, and, as it turns round the vertical spindle *d*, the outer end *a*, with its finger inwards, strikes the briquette and so detaches it from the end of the compressing plunger, to which it sticks. The small spring brings the lever *a b* back to its normal position when released from the plunger head.

The wooden frame is strengthened, as shown in Fig. 2, by strong channel irons 175 by 60 by 8 millimetres (6.9 by 2.35 by 0.315 inches). The shafts, cams, eccentrics, and roller wheels are of wrought-iron. The compression plunger has to be kept cool by a constant current of water.

A machine (Exhibit C) similar to that shown in Exhibit B (a machine of two

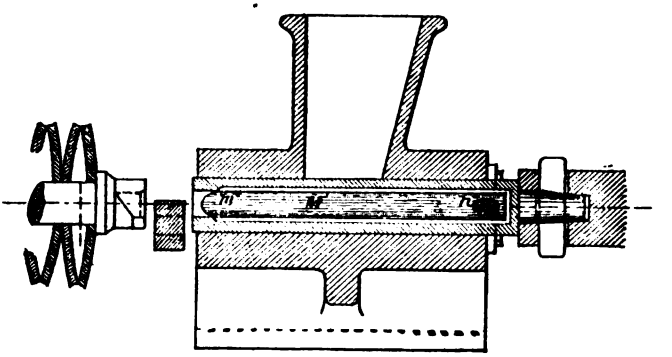


Fig. 1.

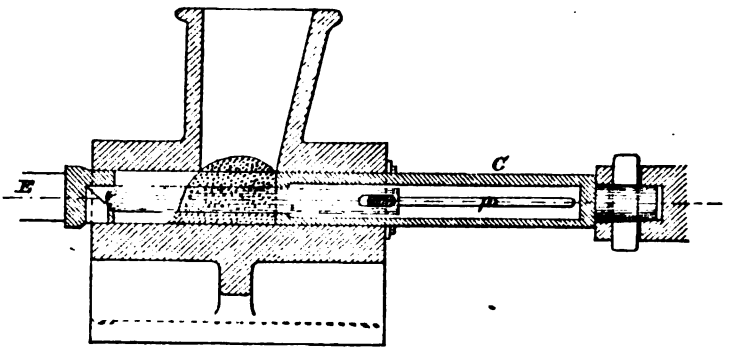


Fig. 2.

EXHIBIT C.

elements), working at the Chazotte mines, near St. Etienne, produces 18 tons of briquettes per day of 10 hours, working at 30 revolutions per minute. The mixture contains 3 per cent. of water and 5 per cent. of pitch. It is mixed in a horizontal mixer heated directly by a fire. The cohesion of the briquettes is increased by an apparatus used by the Paris, Lyons, and Mediterranean Railway Company. It consists of a horizontal cylinder of

sheet-iron 35.5 inches in diameter and 37.5 inches long, fitted with three wings 8 inches wide and the length of the cylinder, fixed to the inside of the shell. Fifty kilogrammes of the briquette mixture are put into the cylinder, and the cylinder is turned for 10 minutes at twenty-five revolutions per minute. The charge is then emptied upon a sieve with 1.18-inch holes, and it is expected to find 82 per cent. of the briquettes resting upon the sieve.

The briquettes formed by this machine are 2¾ inches in diameter and 1¾ inches long. This is the form preferred for locomotives. For domestic purposes, hollow briquettes can be formed by Figs. 1 and 2 (Exhibit C), which is self-explanatory. The briquette is perforated by the pin M, fixed in the center of the mold by the key *n*, and its end is supported by the plug E. The compressing plunger C is, in this case, bored out to pass over the pin M, and has a slot *p* cut out on each side to clear the key *n* when working in and out of the mold.

C. P. WILLIAMS,
Consul.

UNITED STATES CONSULATE,
Rouen, March 24, 1891.

BERLIN SEWERAGE IRRIGATION SYSTEM.

REPORT BY CONSUL-GENERAL EDWARDS.

The westward growth of the city of Berlin, and the consequent construction of new streets in direct connection with Berlin streets, but beyond the city limits and within the municipalities of Charlottenburg and Schöneberg, has been the cause of various complex questions. The drainage of these streets was exceedingly difficult for Charlottenburg and Schöneberg, and, at the same time, Berlin incurred the danger of having the healthful effect of its sewerage system impaired by the drainage of filth into the ship canal. As incorporation of these independent municipalities was impossible, nothing remained but to come to an agreement with them. Accordingly, an agreement was made with Charlottenburg in November, 1885, in regard to that part of its territory extending from the Church of the Twelve Apostles almost to the Zoölogical Gardens, and another agreement was made with Schöneberg in August, 1886, in regard to its territory between the Botanical Gardens and Motz street. It was, therefore, decided to extend the sewerage system beyond the city limits.

At the end of 1888 there were in operation 126,084 metres of walled canals, 441,883 metres of earthenware pipes, and 71,343 metres of force pipes. By means of the earthenware pipes and canals (sewers) 18,221 Berlin built lots (including 27 public closets) were drained.

For the consumption of this sewer water from streets and lots, which is sent out of the city from the pumping stations through force pipes, the city has beyond its limits 3,693.09 hectares (1 hectare = 2.471 acres) of land suitable for irrigation.

The cost of erecting all these works up to the close of the fiscal year 1888–'89 was 69,261,848.84 marks, which was obtained through loans. Of this sum there were expended—

	Marks.
Canals and earthenware-pipe systems	34,746,527.03
Pumping stations (land, buildings, machinery, etc.)	4,752,360.28
Force-pipe systems	9,578,324.69
Suitable farms	12,485,240.02
Adapting 3,202.06 hectares to irrigating purposes	6,168,129.71
Incompleted adaptations	469,270.89
Other expenses on such farms (buildings, machines, roads, regulation of streams, etc.)	1,061,996.22
Total	69,261,848.84

While this project of using the sewer water for agricultural purposes, instead of allowing it to run into the River Spree, has been warmly indorsed by the population of the city, it at first met with some opposition from the State. In 1882 a ministerial commission was appointed to watch the construction and management of the irrigating works of the city of Berlin. Much anxiety was caused in the year 1883 by the report of a State minister to the effect that a further extension of the Berlin sewerage system ought not to be permitted. That the objection has been overcome and the obstacles raised by the country police removed goes to prove that the cleansing of large cities is best effected by this system. The more thought given to this subject the more quickly does the correctness of this conclusion appear.

According to a municipal statute of March 7, 1877, persons whose property borders on new streets are responsible not only for the costs incurred in the purchase of the street surface and in paving, but also for the cost of drainage, and, in justice to inhabitants of thinly populated quarters, a fixed unit of cost had to be adopted for the whole city; the amount thus due for drainage is estimated at 50 marks per metre of street front. In like manner 50 marks per metre of street front is assessed on those streets of Schöneberg and Charlottenburg to which, as shown above, the sewerage system of Berlin was extended, and, in addition to this amount, an annual tax of 6 marks per metre of street front.

The cost of connecting the following six pieces of property with the municipal sewers was borne by the owners of the same:

(1) The garrison hospital, near Tempelhof.

(2) The train establishment on the Tempelhof road.

(3) The aniline factory on the Wiesenüfer.

(4) The technical high school in Charlottenburg.

(5) The Elizabeth hospital for children on the Hasenhaide.

(6) The barracks of the first and second batallions of the railway regiment in Schöneberg.

The receipts from these pieces of property in the fiscal year 1888–'89 amounted to 9,087.74 marks, the receipts in the same period from the municipalities of Charlottenburg and Schöneberg were 59,538.92 marks, and the

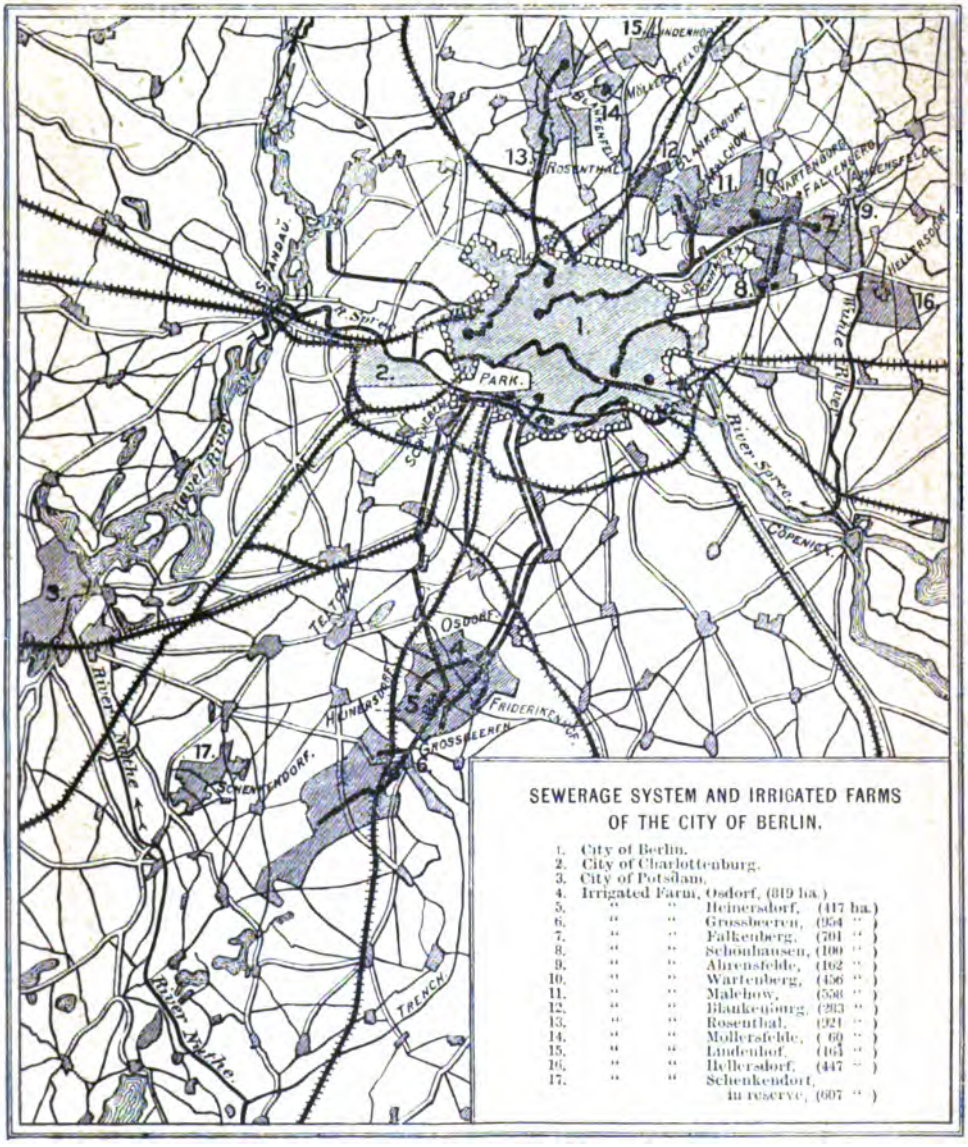
receipts from lots within the Berlin city limits amounted to 1,951,370.51, making a total of 2,019,997.17 marks.

The expenses of the central drainage department and the cost of operating the sewers, pumping stations, etc., amounted to 801,837.16 marks.* There therefore remained over for payment of interest and amortization of loans incurred for constructing pumping stations, sewers, etc., 1,218,160.01 marks. The loans for these purposes amounted to 49,077,212 marks at the close of the fiscal year 1888–'89.

As the amount requisite for interest and amortization was 2,616,997 marks, there was a deficit for this purpose of 1,398,836.99 marks. Moreover, there were other expenses incurred in the completion of radial systems, as well as in the purchase of farms, the adaptation of the same for irrigation, and the erection thereon of necessary buildings, which were paid from loans. The amount expended for such purposes up to the close of 1888–'89 was 20,184,636.84 marks, which required for interest and amortization 1,068,163 marks per annum. As the net surplus of gain from all the irrigated farms was, in 1888–'89, only 219,756.20 marks, there was here, also, a deficit amounting to 848,406.80 marks. By adding to this the foregoing deficit of 1,398,836.90 marks the total deficit is shown to have been 2,247,243.79 marks. This, with other small expenses, necessitated a payment from the city treasury of 2,318,552.85 marks. Up to the present the city council has refused to remedy this state of affairs by raising the rate of drainage dues. From 1882–'83 to 1887–'88 this annual deficit increased from 1,223,633 to 2,449,831 marks, but in the year 1888–'89 it decreased about 150,000 marks. This was due to the relatively favorable results on the irrigated farms. The word relatively is used because not one of these farms paid enough to cover the interest on the amount invested in it. This financial loss is, however, borne with resignation, in view of the good effects thus obtained. When, 17 years ago, the city council decided to adopt this general sewerage system, it stated that it was done "because we are thoroughly convinced that the adoption of this system is the only way to obviate the ever-increasing complaints in regard to the condition of our streets, to stop the poisoning of the ground on which we live, to prevent the defiling of our water courses, and to create in our houses, which shelter nearly a million inhabitants, conditions which will render cleanliness and salubrity possible and be an important forward step for our city."

These results have been obtained, and hence fault is no longer found with the irrigated farms, as they were not established as a financial venture. Moreover, it must be borne in mind that only a part of these farms have been put into working order. If only the older farms be considered—(1) Osdorf, with Heinersdorf and Frederikenhof; (2) Grossbeeren; (3) Falkenberg, with Birknersfelde and Neüahrendsfelde; (4) Malchow, with Blankenburg and Wartenburg—the expended capital (16,021,096.46 marks), it will

*According to the principle, which obtains in all the municipal departments, that each department must pay its own administrative costs, the drainage commission was obliged to pay from its own receipts its personal and office expenses, amounting to 79,320.14 marks.


SEWERAGE SYSTEM AND IRRIGATED FARMS
OF THE CITY OF BERLIN.
1. City of Berlin.
2. City of Charlottenburg.
3. City of Potsdam.
4. Irrigated Farm, Osdorf, (819 ha.)
5. " " Heinersdorf, (417 ha.)
6. " " Grossbeeren, (954 ")
7. " " Falkenberg, (701 ")
8. " " Schönhausen, (100 ")
9. " " Ahrensfelde, (162 ")
10. " " Wartenberg, (456 ")
11. " " Malchow, (550 ")
12. " " Blankenburg, (293 ")
13. " " Rosenthal, (921 ")
14. " " Mollersfelde, (60 ")
15. " " Laudenhof, (164 ")
16. " " Hellersdorf, (447 ")
17. " " Schenkendorf, in reserve, (607 ")
PARK.
Osdorf
Grossbeeren
Schenkendorf
River Spree
River Havel
River Notte
Teltow Canal
Trench
Copenick

be seen, requires for interest at 3½ per cent. (leaving out of account amortization, which is not, properly, to be considered among the expenses) 560,738.38 marks. The proceeds from these estates in 1888–'89 were 237,990.70 marks; hence the deficit of interest was 322,747.68 marks. While this result does not look brilliant, as a fact it is much more favorable per head of population than are the results in other cities employing different systems for cleansing their sewer water. In numbers 16 and 18 of the Sanitary Engineer, newspaper for the year 1889, Chief Engineer Lüttberge, of Freiburg, in an article entitled "Clarifying Establishments and Irrigated Farms," showed, from official data, that the cost per head of population for purifying such water was, at Frankfort, 1.22 marks; Wiesbaden, 0.68 mark; Essen, 0.56 mark; the irrigated farms of Berlin, 0.48 mark. As a matter of fact, moreover, the cost of purifying water in this way in Berlin in radial systems 1 to 7, with a population of 1,193,207 souls, was, in the fiscal year 1888–'89, only 0.27 mark.

But not only in a financial way is the result favorable to the irrigated farm system. While the value of purely mechanical and technical clarifying establishments constantly decreases from wear and tear, the value of these constantly manured estates continually increases. Furthermore, the water which flows away from the irrigated fields is chemically, physically, and bacteriologically purer than that which flows from artificial purifying establishments into the public water courses.

Before showing the practical results of agriculture on the irrigated farms, it may be well to remark that (1) the estates of Hellesdorf and Schenkendorf are not yet used as irrigated farms; (2) Osdorf with Frederikenhof and Heinersdorf, Falkenberg with Birkenfeld and Arendsfelde, and Malchow with Blankenberg and Wartenberg are each treated as one farm, so that, with Grossbeeren, there were four farms; (3) of the lands adapted to irrigation in the year 1888–'89 639 hectares and 3 ares were rented to 408 persons.

As of further explanatory interest, there are given with this report (1) a map giving a general idea of the manner in which disposition is made of the sewer waste of Berlin, and (2) a table of agricultural and pecuniary statistics for the fiscal year 1888–'89 for the four irrigated farms referred to.

It will be seen from this table that the greatest net profit was obtained from cattle turnips and horse carrots—respectively, 250 and 200 marks per hectare; that the profits from summer and winter wheat, winter rape, potatoes, and cabbages exceeded 100 marks per hectare; and that the profits on all other articles were less than 100 marks per hectare, the cultivation of mustard and hemp being even at a loss.

In closing this report it must be added that in the period under report sewer waste was not only used for watering and manuring the city farms, but was also sold to neighboring farmers, the receipts from this source being 3,697.30 marks.

Table showing the gross and net results of agriculture on the four irrigated estates, Osdorf, Grossbeeren, Falkenberg, and Malchow, in the fiscal year 1888–'89.

Name of crop.	Area.	Average crop per hectare.		Average selling price per 100 kilogrammes.		Gross receipts per hectare.	Net receipts per hectare after deduction of 250 marks for expenses.	
		Grain, etc.	Straw.	Grain, etc.	Straw.		Gain.	Loss.
Wheat:	*Hectares.*	*Kilos.*	*Kilos.*	*Marks.*	*Marks.*	*Marks.*	*Marks.*	*Marks.*
Winter	83.81	1,620	3,011	18.16	2.71	375.80	125.80	.....
Summer	181.09	1,664	3,312	18.73	3.05	412.68	162.28	.....
Rye:								
Winter	397.35	1,694	3,072	15.12	3.04	349.52	99.52	.....
Summer	11.42	1,136	2,409	15.00	3.89	264.11	14.11	.....
Barley	76.54	1,534	1,783	13.50	2.82	257.37	7.37	.....
Oats	380.74	1,614	2,916	13.80	2.90	307.30	57.30	.....
Winter rape	23.53	1,657	3,136	21.92	1.00	394.57	144.57	.....
Winter turnips	23.36	1,495	2,817	20.99	1.00	341.97	91.97	.....
Summer rape	26.5	1,133	2,033	25.67	1.00	311.17	61.17	.....
Mustard	2.65	200	1,400	20.00	1.00	54.00	.....	196.00
Hemp:								
Thread	28.63	7,555	.....	3.00	.....	226.65	.....	23.35
Seed		600	5,200	10.00	1.00	112.00	.....	138.00
Cattle turnips	373.16	30,400	.....	1.65	.....	501.60	251.60	.....
Horse carrots	24.22	22,167	.....	2.02	.....	447.77	197.77	.....
Potatoes	53.13	11,372	.....	3.38	.....	384.37	134.37	.....
Cabbage	44.92	12,263	.....	3.00	.....	367.89	117.89	.....
Grass	781.96	59,534	.....	.5335	.....	317.61	67.61	.....

W. H. EDWARDS,
Consul-General.

UNITED STATES CONSULATE-GENERAL,
Berlin, May 20, 1891.

AGRICULTURAL CREDIT CONDITIONS IN AUSTRIA.

*REPORT BY CONSUL HAWES, OF REICHENBERG.**

One great cause of agricultural distress in Austria is to be attributed to the limited scope of agricultural credit conditions. Credit has not, in most cases, the characteristics which the Austrian farmer, by virtue of his importance, should demand.

The rate of interest depends upon the condition of the market, and reaches here, on account of demand fostered by speculation, a height which no estate can bear.

The researches of the central statistical commission during the last year show that registered debts secured by real estate amounts in those lands where a registry system exists, as Bohemia, Moravia, Silesia, upper and lower Austria, Styria, etc., to 3,062,000,000 florins, while small estates alone are indebted in 2,000,000,000 florins, paying as high as 12 per cent., while the larger sums pay 5 and 6 per cent. When it is considered that rents are con-

* In answer to instructions from the Department, at the request of the editor of a leading eastern agricultural journal.

tinually falling, and that Austrian estates in very good districts produce only an earning of 3 to 5 per cent. on an average, it will be seen that the land will not stand such interest. On the contrary, these conditions lead to the continual contraction of new debts.

In order that agricultural credit may really aid the farmer it must (1) be cheap, so that the interest bears a proper relation to production; (2) there must be a fixed rate of interest, uninfluenced by speculation, based entirely upon the rent of the property, if rented; (3) the principal should not be demanded so long as payments are promptly made and interest paid up.

In regard to the various banking institutions of Austria, they have more connection with manufacture than with agriculture, and the Vienna, Prague, and Buda-Pesth banks devote themselves almost exclusively to industry and trade.

THE HYPOTHEKENBANK.

Two great institutions—the Hypothekenbank of the Kingdom of Bohemia and the Landwirthshaftlichen Credit Bank—occupy themselves with transactions with the great agricultural estates.

The first emits "pfandbriefe" based upon their securities and guarantied by the Government. The loans made by this bank are not made in cash, but by issuing their own deeds—the pfandbriefe above referred to. The whole amount of such deeds in circulation must not exceed the amount of actual loans. The rate of interest of mortgage deeds is from 4 to 5 per cent., and is equal to the interest on the mortgage for which the deeds have been issued. Every year it is determined by chance what proportion of the deeds must be cashed. The Government is responsible for the claims of holders of deeds according to the statutes. As the deeds are dealt in "on 'change," they offer excellent investment for orphans' money, etc. The holders of such deeds can at any time sell their claims on the bank. The extent of 4 and 5 per cent. pfandbriefe amounts at present to about 100,000,000 florins.

THE LANDWIRTHSHAFTLICHEN CREDIT BANK.

The Landwirthshaftlichen Credit Bank does a commission business, helps especially the export of sugar, grants hypothecation credits, and gives therefor certificates in amounts of 100, 500, 1,000, and 5,000 florins. It cultivates, also, credit verein transactions, and there belong to it various credit associations of the provincial towns, as well as the sugar factory credit associations. The capital amounts to 2,000,000 florins, divided into 10,000 shares of 200 florins each, of which 100 florins each is paid up. The fund can, however, with the permission of the Government, in case of need be raised to 12,000,000 guilders. For security the general fortune of the bank is held, with the exception of the safety and reserve funds.

The connection which this bank has with agriculture is the granting of loans secured by mortgages, liens on crops, implements, etc., and the insurance of machinery, implements, and animals. The bank is also empowered to aid economical undertakings, especially those for the improvement of land.

In regard to the length of credit, personal credit is granted for indefinite periods and secured credit only for fixed periods, never longer than 3 years. The enjoyment of an open credit can only take place when the applicant has deposited a sum amounting to 5 per cent. in cash of the credit granted in the general safety fund and given the necessary securities. With secured loans this payment is omitted, as the safety fund has nothing to do with such credits. The value of real estate about to be mortgaged is usually fixed by the amount produced by the land and soil. Twenty times this yearly amount will be advanced.

Far more than these great banks, and operating much more advantageously for the small landowner, are the savings and advance funds (*Spar und Vorschusskassen*) and the Agricultural Credit and Partnership Association (Landwirthschaftlichen Credit und Genossenschafts Verein), and these require a much less rate of interest.

CREDIT ASSOCIATIONS.

The agricultural associations, which arise from the union of a number of landowners, accomplish very important work, and wherever they have been established they have succeeded. These accomplish definite undertakings; for instanee, for the regulation of streams in one or two communities, a *Wassergenossenschaft* will be founded; for the drainage of fields and meadows of an entire district, a *Drainagegenossenschaft;* or one for the procuring of implements, machines, and other articles needed for agricultural purposes, which are bought wholesale and delivered to members at less than the retail price.

CREDIT ASSOCIATION OF RAIFFEISEN.

In the last few years a very effective agency in agricultural credit conditions has been developed in the shape of a loan association according to the Raiffeisen system, which is being yearly extended.

The Country Savings and Loan Fund Association, according to the system of F. W. Raiffeisen, has for its object the moral and material improvement of its members, the making of loans to members under a general guaranty, as well as the employment of such unemployed capital as is not needed. With this object in view smaller sums are received, the limit being fixed by the general assembly.

The objects of the society, succinctly stated, are:

(1) To furnish its members money for agricultural purposes in proportion to their credit and reliability under a general guaranty.

(2) To accept deposits of unemployed capital.

(3) The creation of profitable and economical partnerships in the district of the association.

Only responsible owners, lessors, or holders of land in the district, who are in full enjoyment of their rights of citizenship, and who are not members of any other credit associations, are admitted to membership.

The society must be informed, with each application for a loan, of the use to be made of the money, and the officers of the society are required to watch

that such loans are only used for agricultural purposes and in the manner promised. The length of the loan depends upon the purpose for which it is made, and any false use of the money gives the society the right to demand and recover the amount at once.

In order that the officers of the society may be accurately informed of the character of the members, their management, and responsibility, the society should embrace only a small district or several neighboring small communities. In this way the credit of each member may be watched and the danger of loss reduced to a minimum, business simplified, and a journey to a distant town, with the consequent expenses, saved the applicant.

In this limitation of its scope lies one of the greatest advantages of the Raiffeisen theory, though, of course, efficient management and control of loans is all-important in securing that success which this theory has achieved at home.

Officers of the association are bound to preserve the greatest secrecy concerning borrowers, so that no one may be driven into the hands of usurers through a false sense of shame. A free community will thus be created, where independence in society reigns, where the man of small means is not obliged to avoid one of fortune on account of being his debtor.

Every member is entitled to a loan not exceeding the maximum amount, usually 1,000 to 1,500 florins. The loan fund has then for its principal object the furnishing of small current personal and business loans. Larger advances are an exception, and can only be granted by older and richer associations. Members pay only a moderate interest, the rate being fixed by the society, and they may at any time deposit their surplus cash. Usually loans pay an interest of one-half of 1 per cent. to 1 per cent. higher than the association allows on deposits.

According to the statutes of lower Austria, in no case can the interest on loans be more than 1½ per cent. greater than on deposits. In Klein-Petersdorf, for instance, deposits are at present paid 4 per cent., while loans are charged 4¾ per cent.

Each member is bound to pay in his portion in accordance with the laws of the society, and makes himself responsible to the extent of his whole fortune for the affairs of the society. Of course, by means of such unity the credit of the concern is increased. Experience shows that the members run no great risks in cases of proper management. Should the society really be called upon to pay for a debtor, the reserve fund would be first employed, then the assets, and only when these proved insufficient would, in accordance with the law of the society, the obligation fall upon the individual members. Loans are only made to those members who are known to be reliable, and within a fixed amount and for agricultural purposes, and good security is always given.

In the 40 years' existence of these societies there has never been a case where a member has been injured by the responsibilities which he has assumed in becoming a member of such an association.

As already stated, each member must subscribe for a share, however small, and thus the business capital is created. According to the real principle of Raiffeisen, however, no member should receive more than one share.

Interest is paid on shares either in the shape of a dividend or, as on deposits, at a fixed rate. In no case, however, should the interest on shares exceed that paid on loans, and members should receive no more interest than at this rate.

In order that membership may be open to all, the value of the shares is fixed at from 10 to 20 florins. It should also be made possible to purchase them on installments. In accordance with the statutes of the Lower Austria Land Commission, a member may hold as many as twenty-five shares.

When, as in Austria, the shares draw a fixed rate of interest, the same as that paid upon deposits, nothing can be said against holding several shares. The association thus accumulates a larger business capital, whereas the possessor of the various shares has only one vote, though increasing his risks. When, however, the interest on shares is paid in the form of a dividend, even if this does not exceed the rate paid on loans, this modification of the Raiffeisen principle must be handled with care, and can scarcely be recommended, inasmuch as the holding of many shares may cause efforts to be made to increase the rate of interest. Such influences must be strongly combatted. It is, on the whole, recommended to limit the members to one share. To those who claim that the business capital will thus be limited it may be remarked that every member is free to furnish as much money as he pleases as deposits.

The capital arising from deposits, sales of shares, etc., will only be lent to members. Securities may be in the form of bond, deposit of securities, or a mortgage. A note of hand is, according to the Raiffeisen theory, entirely excluded, and this principle is adhered to in lower Austria. In Moravia Silesian "Kuhländchen" notes are accepted.

It is most strongly recommended to adhere strictly to the principles adopted by Raiffeisen in funding his credit verein, which are to-day governing over one thousand successful institutions of this character, and have been so thoroughly tested that even a small modification may prove a disadvantage. It is true that fiscal reasons may cause a modification to be necessary; for instance, in Austria the stamp tax, which is nearly five times heavier on bonds, mortgages, etc., than on a note of hand or bill of exchange, causes the latter security to be employed. In lower Austria loans are made for so long a period as 4 years only in exceptional cases. It is thought by many that this is too short a time.

The difference between the interest on loans and that paid on deposits constitutes the profits. From these profits are first paid the society's expenses, then the interest or dividends on shares. Any excess is employed as business capital or is used for other purposes.

Whereas other loan funds pay dividends of 20 per cent. or more, according to Raiffeisen's system the excess is used to create a fund, and when this

fund reaches an amount agreed upon its collection shall cease and the rate of interest shall be further reduced. The association must make no profit from the necessities of its members. Profits should be used only for his security and to increase his capabilities; when this is accomplished, they should be reduced or applied for the general benefit of all members. And just because this system does not seek to produce high dividends and contents itself with reasonable interest, is credit made cheap and the principal aim of the society reached.

As a corporation of debtors, its first regard is for the needy, and not to provide large dividends for the creditor. The confidence of capitalists must be secured through the security offered and the reliability of the management, and not by producing dividends at the expense of the needy.

The management of the society is in the hands of a committee of five, which decides in regard to the admittance of new members, the granting of loans, etc. To this committee is also attached a treasurer or bookkeeper. A board of directors of nine members supervises the acts of the committee and treasurer. However, the general meeting, which usually takes place semiannually to elect committees, fix the rate of interest, and attend to other matters of importance, is supreme.

JOHN B. HAWES,

UNITED STATES CONSULATE, *Consul.*

Reichenberg, June 10, 1891.

WOOLEN-GOODS TRADE OF BELGIUM.

REPORT BY COUNSEL DANFORTH, OF LIEGE.

WOOLEN YARNS.

The commercial movement of 1890 is not considered a good one, and for wool-spinning it was quite disastrous. On an average, there was no profit in spinning, and several spinning mills were forced to cease work, and some failed.

Table showing the importation of combed and carded woolen yarns into Belgium.

Whence imported.	1890.	1889.	1888.
	Kilos.	*Kilos.*	*Kilos.*
Germany	71,730	54,330	52,420
England	160,390	186,380	164,300
France	595,480	673,610	663,330
Other countries	11,400	14,080	10,640
Total	839,000	928,400	890,690

The slight diminution of importations may be explained by the enlarged production of combed woolen yarn and the greater favor that fashion some months ago began to show to carded woolen cloths.

The importation consists almost exclusively in combed woolen yarn and yarn for knitting and embroidering purposes, which are not manufactured in Belgium.

The customs duties collected by the treasury upon the above were 218,750, 243,320, and 232,660 francs, respectively.

Table showing the exportation of woolen yarns from Belgium.

Whither exported.	1890.	1889.	1888.
	Kilos.	*Kilos.*	*Kilos.*
Germany and Austria	3,063,660	4,186,700	3,933,170
England	6,930,920	7,518,300	7,078,950
France	319,130	502,860	660,680
Other countries	796,400	449,920	321,250
Total	11,110,110	12,657,780	11,994,050

The diminution is considerable. The difference, compared with 1889, is 1,547,670 kilogrammes, and, compared with 1888, it is 883,940 kilogrammes. This decrease is explained by the bad state of business through the whole year. This period is the worst ever observed in wool-spinning, and there is up to this moment no change in the situation. Germany and Austria show the largest decrease.

Business was bad in both of these countries, especially in Austria. The cloth manufacturers were partly deprived of orders, and, besides, the Belgian spinners had to sustain the competition of the "home mills," which are now growing in importance.

England is still the principal market for Belgian yarns. Here the decrease is not so important.

France took only 319,130 kilogrammes, while she took 502,860 kilogrammes in 1889 and 660,680 kilogrammes in 1888.

This change comes especially from the change in the fashion, which turns more or less to carded woolen stuffs. The other countries show an important increase. This was due to important purchases made by the United States. But this did not last long, the new tariff having almost completely shut this yarn out of the United States.

WOOLEN TISSUES.

Table showing the importations of woolen tissues into Belgium.

Articles.	1890.	1889.	1888.
	Francs.	*Francs.*	*Francs.*
Cloth and similar goods	2,558,290	2,191,290	2,221,900
Heavy tissues	2,029,760	1,765,400	1,423,430
Light tissues	16,489,560	15,630,080	16,174,830
Total	20,877,610	19,586,770	19,820,160

There is an increase of 1,290,840 francs. While Germany furnishes only 75,000 francs of cloth, she increases the shipments of heavy tissues 68,000 francs and the light tissues 605,000 francs.

England increases her sales of cloth 240,000 francs; heavy tissues, 286,000 francs; and light tissues, 235,000 francs. It looks as if fashion was favoring England.

With France the variation is very slight. There is a diminution of about 1,000 francs in cloth, an increase of about 30,000 francs in heavy tissues and 53,000 francs in light tissues.

For other countries the variation is not worth mentioning.

Table showing the exports of woolen tissues from Belgium.

Whither exported.	1890.	1889.	1888.
Cloths, cassimeres, and similar goods.	*Kilos.*	*Kilos.*	*Kilos.*
Germany	154,750	119,220	91,120
England	170,010	74,060	83,000
Brazil	21,110	25,290	30,350
United States	182,230	156,900	178,140
France	461,420	503,970	571,830
Argentine Republic	97,760	67,130	67,450
Netherlands	142,500	96,930	130,280
Other countries	251,370	334,260	223,780
Total	1,481,150	1,377,760	1,375,950
Coatings, duffels, and other heavy tissues.			
England	45,300	90,440	61,160
Brazil	5,230	9,020	10,820
United States	13,930	41,380	9,280
France	18,490	17,330	41,550
Hamburg	15,600	78,300	13,300
Netherlands	33,930	34,510	39,330
Argentine Republic	25,450	74,890	46,010
Other countries	67,360	36,810	46,320
Total	225,290	382,680	267,770
Light tissues.			
Germany	19,760	59,370	9,180
England	161,340	89,140	109,680
France	145,130	164,000	139,190
Hamburg	11,800	2,100	24,360
Italy	48,470	44,650	32,170
Netherlands	206,330	224,580	132,820
Argentine Republic	28,120	7,490	30,970
Switzerland	162,550	34,350	5,340
Other countries	85,860	61,580	103,990
Total	869,360	687,260	587,700

In considering the above figures we find a steady increase. There was, in 1890, an increase of 104,000 kilogrammes, compared with 1889, for cloth. The light tissues show an increase of 182,000 kilogrammes, while the heavy tissues show a decrease of 157,000 kilogrammes. The three kinds together give an increase of 123,000 kilogrammes, compared with 1889, and 344,000 kilogrammes, compared with 1888.

The above statistics are taken from a semiofficial article appearing in the organ of the Verviers Chamber of Commerce.

JAMES R. DANFORTH,
Consul.

UNITED STATES CONSULATE,
Liege, April 10, 1891.

TRADE AND INDUSTRIES OF THE WINNIPEG DISTRICT.

REPORT BY CONSUL TAYLOR.

THE CONSULAR DISTRICTS DEFINED.

The consular district of Winnipeg, British North America, includes three divisions—eastern, or the Port Arthur district of the province of Ontario; central, or the province of Manitoba, containing the Winnipeg consulate and the consular agencies of Emerson, Gretna, and Deloraine, on the international frontier; and the Northwest Territories of Canada between Manitoba and the Rocky Mountains, with a consular agency recently established at Lethbridge. York Factory and other ports on the western coast of Hudson Bay report to the Canadian collector at Winnipeg.

IMPORTS.

The commerce of Manitoba and York Factory will be first considered. The foreign imports for the year ended June 30, 1890, were $2,071,264 dutiable goods, returning a revenue of $649,026.75, and $482,021 free goods, a total of $2,555,285. The general character of this trade, and especially its relation to the United States and Great Britain, will be illustrated by the following table:

Table showing the imports into the Winnipeg consular district from the United States and Great Britain for 1889-'90.

Articles.	From the United States.	From Great Britain.
Ale and beer:		
In bottles	$12,426	$5,246
In casks	2,922	213
Animals (living):		
Horned cattle	562	.....
Hogs	624	.....
Horses	25,220	.....
Sheep	2,652	.....
Other	469	25
Baking powder	25,405	2
Books	12,369	8,382
Brass, manufactures of	3,913	586
Breadstuffs	172,178	6,813
Brick and tiles	5,075	.....
Candles	1,243	128
Carriages	10,354	282
Clocks	2,511	.....
Coal (bituminous)	34,718	234
Copper, manufactures of	1,195	1,300
Cotton, manufactures of	12,685	75,497
Drugs and chemicals	8,880	3,397
Earthenware and china	1,548	8,868
Fancy goods	2,353	18,282
Fish	8,723	926
Flax, manufactures of	638	17,874

Table showing the imports into the Winnipeg consular district, etc.—Continued.

Articles.	From the United States.	From Great Britain.
Fruits:		
Dried and nuts	$29,749	$2,499
Green	55,292	10
Furs and manufactures	2,494	614
Glass and manufactures	8,663	2,866
Gloves and mittens	5,123	7,499
Gold and silver and manufactures	2,511	1,369
Gunpowder and explosives	5,363	3,000
Gutta-percha, manufactures of	6,615	4,693
Hats, caps, etc	7,170	5,814
Honey	1,312	.....
Hay	26,787	26
Hops	3,608	402
Iron and steel, manufactures of	221,328	17,155
Jewelry	5,723	755
Leather and manufactures	16,992	2,844
Musical instruments	6,386	912
Oils:		
Animal	435	.....
Mineral	26,812	29
Vegetable	3,837	245
Paints and colors	960	95
Paper and manufactures	17,242	4,293
Provisions	162,318	5,565
Silk and manufactures	1,039	30,360
Spices	594	350
Spirits and wines	4,143	10,355
Stone and manufactures	3,502	11
Sugars, sirups, etc	17,379	6,254
Tallow	3,009	.....
Tea	357	26,727
Tin and manufactures	3,088	437
Tobacco and manufactures	17,436	3,762
Twine	269	90
Vegetables	32,653	190
Watches and materials	4,570	73
Wood and manufactures	252,237	3,154
Wool and manufactures	2,417	234,192
Miscellaneous	110,543	146,131
Total	1,420,995	581,107

The total dutiable importations included $69,162 from other countries, the leading articles of which were: Window glass, $9,639, from Belgium; manufactures of cotton, $3,652, from Germany; dried fruits, $774, from Greece; and spirits and wine, $13,492 from France, $2,682 from Holland, and $2,761 from Portugal; also, watches and materials from Switzerland.

The Manitoba importations of free goods, including entries at Winnipeg and the frontier ports of Emerson and York Factory, were: From the United States, $343,120; from Great Britain, $110,399; from other countries, $30,502; total, $484,021. The leading articles from the United States were: Anthracite coal, $20,536; eggs, $12,681; green fruit, $47,744; undressed furs, $2,139; steel rails, $54,207; copper wire, $17,746; settlers' effects, $85,040. The leading articles from Great Britain were: Salt, $488; set-

tlers' effects, $24,416; black tea, $35,954. Other imports of tea were: From China, $17,016; from Japan, $5,808.

The dutiable importations at the consular agency of Port Arthur, Ontario, were $268,858, of which $264,962 were from the United States, $2,684 from Great Britain, and $1,212 from other countries. The leading articles were: Bituminous coal, $206,891; meats, $17,844; coal oil, $13,244; iron machinery, $6,515; gunpowder, $5,223; also, free entries of anthracite coal valued at $32,317 and other articles amounting to $41,509, of which $40,759 were from the United States.

The dutiable importations of the Northwest Territories were $104,863; free goods, $37,836; total, $142,699—entered at the Canadian port of Fort McLeod, imported from the United States, except $3,631 from Great Britain, and consisting almost exclusively of animals and emigrant effects.

The imports of the Winnipeg consular district distributed as above were as follows:

Whence imported.	Dutiable.	Free.	Total.
Manitoba	$2,071,264	$484,021	$2,555,285
Port Arthur	268,858	41,509	310,367
Northwest Territories	104,863	37,836	142,699
Total	2,444,985	563,366	3,008,351

CANADIAN REVENUE.

Upon the aggregate of $2,444,985 dutiable goods the duties received amounted to $752,501.58, or an average of 25 per cent. ad valorem, including specific duties expressed in ad valorem.

EXPORTS.

The Manitoba exports, including only shipments from Winnipeg, Emerson, Gretna, and York Factory, were as follows: $330,070 to the United States, $656,903 to Great Britain, and $1,411 to other countries; total, $988,384. To the United States the exports consisted mostly of buffalo bones, $10,139; fish, $95,931; undressed furs, $59,493; hides, $9,028; wheat, $911; and, in addition, the following articles more properly described as effects of emigrants to the United States, although enumerated by the officers of the Canadian customs as follows: Books, $3,321; clothing, $25,526; household effects, $18,382; iron and steel manufactures (sewing machines), $4,292; musical instruments, $3,790; wooden manufactures (furniture), $9,160. Of the exports to Great Britain $650,000, out of a total of $656,903, were undressed furs—nearly double the value of the previous year ($369,901)—shipped by the Hudson Bay Company.

The exports to the United States from Port Arthur, Ontario, were $204,356, of which the leading articles were: Fish, $12,988.54; silver ore, $180,136; silver bullion, $3,500; baryta ore, $850; emigrants' effects, $1,885. The exports to Great Britain were: Ores, etc., $15,100. The total exportation

from Port Arthur was $219,356. The Canadian customs report no exportation from the Northwest Territories.

PACIFIC TRADE.

There has been no material change in the trade with British Columbia, which is estimated to be $200,000 of exports, principally flour, butter, and eggs, with return shipments of fish and lumber of equal amount.

DOMESTIC, OR INTERPROVINCIAL, COMMERCE.

The domestic exports to the eastern provinces have been chiefly 12,000,000 bushels of wheat, which for the year 1890 averaged 60 cents per bushel, amounting, with shipments of other cereals, fish, and furs, to $8,000,000. I still assume (in the absence of official reports of railway transportation) that the domestic imports into this consular district from the eastern provinces and British Columbia will be double the foreign importation, or $6,136,702.

Upon the foregoing basis the following aggregates are presented:

Table showing the trade of the Winnipeg consular district with various foreign countries in 1889–'90.

Countries.	Imports.	Exports.	Total.
Canada	$6,136,702	$8,000,000	$14,136,702
United States	2,168,125	534,426	2,702,551
Great Britain	698,591	672,003	1,370,594
Germany	21,711	.....	21,711
China	17,024	.....	17,024
France	16,823	3	16,826
Japan	15,538	983	16,521
Belgium	9,716	.....	9,716
Holland	4,020	.....	4,020
Spanish West Indies	3,746	.....	3,746
Spain	3,073	.....	3,073
Portugal	2,761	.....	2,761
Turkey	1,312	.....	1,312
Russia	865	.....	865
Greece	774	.....	774
Switzerland	641	400	1,041
British West Indies	323	.....	323
Iceland	273	.....	273
Austria	143	.....	143
British East Indies	103	.....	103
Egypt	96	.....	96
Denmark	13	.....	13
British Africa	.....	.....	25
Total	9,103,073	9,207,840	18,310,913

AGRICULTURE.

Passing from the general trade statistics of the fiscal year ended June 30, 1890, I anticipate the succeeding 6 months to the termination of the calendar year for the purpose of a statement of the crop of 1890. My own judgment concurs with the opinion of Mr. C. N. Bell, secretary of the Winnipeg Board of Trade, that the wheat crop yielded, at 20 bushels per

acre, a surplus of 12,000,000 bushels for exportation, besides shipments of barley, oats, potatoes, and flaxseed to the amount of $1,000,000. The crop of potatoes was extraordinary—not less than an average of 235 bushels per acre.

RAILWAY PROGRESS.

In my last annual report I stated the total railway mileage in Canada, west of Lake Superior, as 3,310 miles, of which 1,326 miles were in Manitoba, including 266 miles of extensions to Winnipeg and Brandon by the Northern Pacific Railway. During 1890 the Canadian Pacific added 25 miles in Manitoba, branches north of the main line in the Northwest Territories from Regina to Prince Albert, on the North Saskatchewan River, 246 miles, and from Calgary, near the Rocky Mountains, in the direction of Edmonton, 100 miles, and in British Columbia about 50 miles, connecting with the international frontier and American lines in the Kootenay district, and due south of New Westminster and Vancouver. Other extensions are contemplated on the same lines during 1891, not less than 300 miles in extent. At the beginning of 1892 western Canada will have in operation 4,000 miles of railway to 400,000 people, or 100 miles per capita, a result attributable to land grants by the Dominion Government valued at $2.50 per acre, or $22,752,000, with a prospect of sale to settlers at double that amount. A similar land grant to the Hudson Bay Railway is estimated by Mr. A. M. Burgess, deputy minister of the interior, to have a present money value of $10,400,000 (length of road 650 miles), to which the Manitoba government adds a bonus of $1,500,000 on the completion of the line in 5 years. As to other railway enterprises, a connection with Manitoba from the Saskatchewan coal district is completed, but a more direct line from Duluth to Winnipeg is postponed until 1892.

JAMES W. TAYLOR,
Consul.

UNITED STATES CONSULATE,
Winnipeg, May 5, 1891.

PHOSPHORUS AND MATCHES IN SPAIN.

REPORT BY CONSUL TURNER, OF CADIZ.

PHOSPHORUS.

The greater part of the phosphorus consumed in Spain is imported from France. It pays an import duty of 35 pesetas per 100 kilogrammes, or $6.75½ United States gold.

The amount and value of the imports of phosphorus into Spain for the past 2 years were as follows: 1889, 48,176 kilogrammes, valued at 289,056 pesetas; 1890, 58,776 kilogrammes, valued at 352,656 pesetas. The foregoing are official figures. The principal places of consumption are indicated by the list of match manufacturers inclosed.

Quoted prices of French dealers are as follows: For boxes containing 10 cans, each can having in it sticks of phosphorus aggregating in weight 10 kilogrammes, and being hermetically sealed in water, 6.50 pesetas, or $1.25½, per kilogramme; that is, 600 pesetas, or $125.45, per 100 kilogrammes.

The terms of sale are: For sight draft on London or Paris, issued on presentation of bill of lading to purchasers, 5 per cent. off and a discount of 2 per cent. from above quotation. If the draft is drawn at 30, 60, or 90 days, a straight discount of 3 per cent. is given. When the order is accompanied by certified check or sight draft on London or Paris, a discount of 10 per cent. is made; but when sold on time, say 60, 90, or 120 days from date of arrival of goods at the place of business of purchaser, no discounts are given. I have no doubt that the foregoing price is shaded still more to large dealers, but how much I am unable to say. The prices given include freight and insurance to purchaser's place of business.

Cadiz or Seville would be a good point for distribution, and ships can be secured for Cadiz at any time by applying to Hagemeyer & Brunn, I. M. Ceballos, and R. Florez, of New York.

The proper way to secure trade here is to send over a salesman thoroughly instructed in every particular, and let him solicit orders. The cost of such an experiment would not be large, and it would be more satisfactory than months of correspondence. The fare from New York to Cadiz is $70; traveling in Spain by rail, 3 to 6 cents per mile; by water, 2 cents per mile; hotel rates, from $1 to $3 per day. In addition to taking orders for phosphorus, he would find Spain a good market for many other chemical productions, and he could buy wine lees here cheaper than in any other country of Europe.

The following are wholesale importers of phosphorus who supply many match-makers: Hijos de José Vidal y Ribas, Barcelona; Vicente Ferrer, Barcelona; J. Buffin, Barcelona.

MATCH MANUFACTURERS.

The following are the names and addresses of the match manufacturers, with their trade-marks: Moroder Hermanos y Ca., Valencia, "El Globo;" Moroder Hermanos y Ca., Hospital No. 19, Barcelona, "El Globo;" Ramon Aymerich, Espendiction San Pablo, Barcelona, "La Luz Creciente;" Edwardo Alvarez, Cordova, "Santa Matilde;" José Gonzales, Calatrava No. 3, Seville, "La Corneta;" Garrido y Baldiz, Calle Garaicoechea, Cadiz, "La Trompeta;" Diaz Gonzalez y Ca., Calle San Francisco Paula 3, Cadiz, "La Gaviota;" Garay y Arregui, Oñate, Guipuzcoa.

WINE LEES EXPORTER.

Eduardo de Guernica, Calle Doblones, Cadiz, is an exporter of wine lees.

R. W. TURNER,
Consul.

UNITED STATES CONSULATE,
Cadiz, May 25, 1891.

APPENDIX.

RECIPROCITY WITH SPAIN.

BY THE PRESIDENT OF THE UNITED STATES.—A PROCLAMATION.

Whereas, pursuant to section 3 of the Act of Congress approved October 1, 1890, entitled "An Act to reduce the revenue and equalize duties on imports, and for other purposes," the Secretary of State of the United States of America communicated to the Government of Spain the action of the Congress of the United States of America, with a view to secure reciprocal trade, in declaring the articles enumerated in said section 3, to wit, sugars, molasses, coffee and hides, to be exempt from duty upon their importation into the United States of America;

And whereas the Envoy Extraordinary and Minister Plenipotentiary of Spain at Washington has communicated to the Secretary of State the fact that, in reciprocity and compensation for the admission into the United States of America free of all duty of the articles enumerated in section 3 of said act, the Government of Spain will, by due legal enactment, and as a provisional measure, admit, from and after September 1, 1891, into all the established ports of entry of the Spanish islands of Cuba and Porto Rico, the articles or merchandise named in the following Transitory Schedule, on the terms stated therein, provided that the same be the product or manufacture of the United States and proceed directly from the ports of said States:

TRANSITORY SCHEDULE.

Products or manufactures of the United States to be admitted into Cuba and Porto Rico free of duties:

1. Meats, in brine, salted or smoked, bacon, hams, and meats preserved in cans, in lard or by extraction of air; jerked beef excepted.

2. Lard.

3. Tallow and other animal greases, melted or crude, unmanufactured.

4. Fish and shellfish, live, fresh, dried, in brine, smoked, pickled; oysters and salmon in cans.

5. Oats, barley, rye and buckwheat and flour of these cereals.

6. Starch, maizena and other alimentary products of corn, except corn meal.

7. Cotton seed, oil and meal cake of said seed for cattle.

8. Hay, straw for forage and bran.

9. Fruits, fresh, dried and preserved, except raisins.

10. Vegetables and garden products, fresh and dried.

11. Resin of pine, tar, pitch and turpentine.

12. Woods of all kinds, in trunks or logs, joists, rafters, planks, beams, boards, round or cylindric masts, although cut, planed and tongued and grooved, including flooring.

13. Woods for cooperage, including staves, headings and wooden hoops.

14. Wooden boxes, mounted or unmounted, except of cedar.

15. Woods, ordinary, manufactured into doors, frames, windows and shutters, without paint or varnish, and wooden houses, unmounted, without paint or varnish.

16. Wagons and carts for ordinary roads and agriculture.

17. Sewing machines.

18. Petroleum, raw or unrefined, according to the classification fixed in the existing orders for the importation of this article in said islands.

19. Coal, mineral.

20. Ice.

Products or manufactures of the United States to be admitted into Cuba and Porto Rico on payment of the duties stated:

21. Corn or maize, 25 cents per 100 kilogrammes.

22. Corn meal, 25 cents per 100 kilogrammes.

23. Wheat, from January 1, 1892, 30 cents per 100 kilogrammes.

24. Wheat-flour, from January 1, 1892, $1 per 100 kilogrammes.

Products or manufactures of the United States to be admitted into Cuba and Porto Rico at a reduction of duty of 25 per centum:

25. Butter and cheese.

26. Petroleum, refined.

27. Boots and shoes in whole or in part of leather or skins.

And whereas the Envoy Extraordinary and Minister Plenipotentiary of Spain in Washington has further communicated to the Secretary of State that the Government of Spain will, in like manner and as a definitive arrangement, admit, from and after July 1, 1892, into all the established ports of entry of the Spanish islands of Cuba and Porto Rico, the articles or merchandise named in the following schedules A, B, C, and D, on the terms stated therein, provided that the same be the product or manufacture of the United States and proceed directly from the ports of said States:

SCHEDULE A.

Products or manufactures of the United States to be admitted into Cuba and Porto Rico free of duties:

1. Marble, jasper and alabaster natural or artificial, in rough or in pieces, dressed, squared and prepared for taking shape.

2. Other stones and earthy matters, including cement, employed in building, the arts and industries.

3. Waters, mineral or medicinal.

4. Ice.

5. Coal, mineral.

6. Resin, tar, pitch, turpentine, asphalt, schist and bitumen.

7. Petroleum, raw or crude, in accordance with the classification fixed in the tariff of said islands.

8. Clay, ordinary, in paving tiles large and small, bricks, and roof tiles unglazed, for the construction of buildings, ovens and other similar purposes.

9. Gold and silver coin.

10. Iron, cast in pigs, and old iron and steel.

11. Iron, cast, in pipes, beams, rafters and similar articles, for the construction of buildings, and in ordinary manufactures. (See repertory.)

12. Iron, wrought, and steel, in bars, rails and bars of all kinds, plates, beams, rafters, and other similar articles for construction of buildings.

13. Iron, wrought, and steel, in wire, nails, screws, nuts, and pipes.

14. Iron, wrought, and steel, in ordinary manufactures and wire cloth unmanufactured. (See repertory.)

15. Cotton, raw, with or without seed.

16. Cotton seed, oil and meal cake of same for cattle.

17. Tallow and all other animal greases, melted or crude, unmanufactured.

18. Books and pamphlets, printed, bound and unbound.

19. Woods of all kinds, in trunks or logs, joists, rafters, planks, beams, boards and round or cylindric masts, although cut, planed, tongued and grooved, including flooring.

20. Wooden cooperage, including staves, headings and wooden hoops.

21. Wooden boxes, mounted or unmounted, except of cedar.

22. Woods, ordinary, manufactured into doors, frames, windows and shutters, without paint or varnish, and wooden houses, unmounted, without paint or varnish.

23. Woods, ordinary, manufactured into all kinds of articles turned or unturned, painted or varnished, except furniture. (See repertory.)

24. Manures, natural or artificial.

25. Implements, utensils and tools for agriculture, the arts and mechanical trades.

26. Machines and apparatus, agricultural, motive, industrial and scientific, of all classes and materials, and loose pieces

for the same, including wagons, carts and handcarts for ordinary roads and agriculture.

27. Material and articles for public works, such as railroads, tramways, roads, canals for irrigation and navigation, use of waters, ports, lighthouses, and civil construction of general utility, when introduced by authorization of the Government, or if free admission is obtained in accordance with local laws.

28. Materials of all classes for the construction, repair in whole or in part of vessels, subject to specific regulations to avoid abuse in the importation.

29. Meats, in brine, salted and smoked, including bacon, hams, and meats preserved in cans, in lard or by extraction of air; jerked beef excepted.

30. Lard and butter.

31. Cheese.

32. Fish and shellfish, live, fresh, dried, in brine, salted, smoked and pickled; oysters and salmon in cans.

33. Oats, barley, rye and buckwheat, and flour of these cereals.

34. Starch, maizena and other alimentary products of corn, except corn meal.

35. Fruits, fresh, dried and preserved, except raisins.

36. Vegetables and garden products, fresh and dried.

37. Hay, straw for forage and bran.

38. Trees, plants, shrubs and garden seeds.

39. Tan bark.

SCHEDULE B.

Products or manufactures of the United States to be admitted into Cuba and Porto Rico on payment of the duties stated:

40. Corn or maize, 25 cents per 100 kilogrammes.

41. Corn meal, 25 cents per 100 kilogrammes.

42. Wheat, 30 cents per 100 kilogrammes.

43. Wheat-flour, $1 per 100 kilogrammes.

44. Carriages, cars and other vehicles for railroads or tramways, where authorization of the Government for free admission has not been obtained, 1 per centum ad valorem.

SCHEDULE C.

Products or manufactures of the United States to be admitted into Cuba and Porto Rico at a reduction of duty of 50 per centum:

45. Marble, jasper and alabaster, of all kinds, cut into flags, slabs or steps, and the same worked or carved in all kinds of articles polished or not.

46. Glass and crystal ware, plate and window glass, and the same silvered, quicksilvered and platinized.

47. Clay in tiles, large and small, and mosaic for pavements, colored tiles, roof tiles glazed and pipes.

48. Stoneware and fine earthenware, and porcelain.

49. Iron, cast, in fine manufactures or those polished, with coating of porcelain or part of other metals. (See repertory.)

50. Iron, wrought, and steel, in axles, tires, springs and wheels for carriages, rivets and their washers.

51. Iron, wrought, and steel, in fine manufactures or those polished, with coating of porcelain or part of other metals, not expressly comprised in other numbers of these schedules, and platform scales for weighing. (See repertory.)

52. Needles, pens, knives, table and carving, razors, penknives, scissors, pieces for watches and other similar articles of iron and steel.

53. Tin plate in sheets or manufactured.

54. Copper, bronze, brass and nickel, and alloys of same with common metals, in lump or bars, and all manufactures of the same.

55. All other common metals and alloys of the same, in lump or bars, and all manufactures of the same, plain, varnished, gilt, silvered or nickeled.

56. Furniture of all kinds, of wood or metal, including school furniture, blackboards and other materials for schools, and all kinds of articles of fine woods not expressly comprised in other numbers of these schedules. (See repertory.)

57. Rushes, esparto, vegetable hair, broom corn, willow, straw, palm and other similar materials, manufactured into articles of all kinds.

58. Pastes for soups, rice flour, bread and crackers, and alimentary farinas, not comprised in other numbers of these schedules.

59. Preserved alimentary substances and canned goods, not comprised in other numbers of these schedules, including sausages, stuffed meats, mustards, sauces, pickles, jams and jellies.

60. Rubber and gutta-percha, and manufactures thereof, alone or mixed with other substances (except silk), and oil-cloths and tarpaulin.

61. Rice, hulled or unhulled.

SCHEDULE D.

Products or manufactures of the United States to be admitted into Cuba and Porto Rico at a reduction of duty of 25 per centum:

62. Petroleum, refined, and benzine.

63. Cotton manufactured, spun or twisted, and in goods of all kinds, woven or knit, and the same mixed with other vegetable or animal fibers in which cotton is an equal or greater component part, and clothing exclusively of cotton.

64. Rope, cordage and twine of all kinds.

65. Colors, crude and prepared, with or without oil, inks of all kinds, shoe blacking and varnishes.

66. Soap, toilet, and perfumery.

67. Medicines, proprietary or patent and all others, and drugs.

68. Stearine and tallow manufactured in candles.

69. Paper for printing, for decorating rooms, of wood or straw for wrapping and packing and bags and boxes of same, sandpaper and pasteboard.

70. Leather and skins, tanned, dressed, varnished or japanned, of all kinds, including sole leather or belting.

71. Boots and shoes in whole or in part of leather or skins.

72. Trunks, valises, traveling bags, portfolios and other similar articles in whole or in part of leather.

73. Harness and saddlery of all kinds.

74. Watches and clocks, of gold, silver or other metals, with cases of stone, wood or other material, plain or ornamented.

75. Carriages of two or four wheels and pieces of the same.

It is understood that flour which, on its exportation from the United States, has been favored with drawbacks shall not share in the foregoing reduction of duty.

The provisional arrangement as set forth in the Transitory Schedule shall come to an end on July 1, 1892, and on that date be substituted by the definitive arrangement as set forth in schedules A, B, C, and D.

And that the Government of Spain has further provided that the laws and regulations, adopted to protect its revenue and prevent fraud in the declarations and proof that the articles named in the foregoing schedules are the product or manufacture of the United States of America, shall place no undue restrictions on the importer, nor impose any additional charges or fees therefor on the articles imported.

And whereas the Secretary of State has, by my direction, given assurance to the Envoy Extraordinary and Minister Plenipotentiary of Spain at Washington that this action of the Government of Spain, in granting exemption of duties to the products and manufactures of the United States of America on their importation into Cuba and Porto Rico, is accepted for those islands as a due reciprocity for the action of Congress as set forth in section 3 of said Act:

Now, therefore, be it known that I, BENJAMIN HARRISON, President of the United States of America, have caused the above-stated modifications of the tariff laws of Cuba and Porto Rico to be made public for the information of the citizens of the United States of America.

In testimony whereof, I have hereunto set my hand and caused the seal of the United States to be affixed.

Done at the City of Washington, this thirty-first day of July, one thousand eight hundred and ninety-one, and of the independence of the United States of America the one hundred and sixteenth.

[SEAL.]

By the President: BENJ. HARRISON.

WILLIAM F. WHARTON,

Acting Secretary of State.

PRECEDING CORRESPONDENCE.

MR. BLAINE TO SEÑOR SUAREZ GUANES.

DEPARTMENT OF STATE,
Washington, January 3, 1891.

SIR: I have the honor to bring to your attention the fact that the Congress of the United States, at its last session, enacted a law, of which a copy is enclosed herewith, in which provision was made for the admission into the United States, free of all duty, of the following articles: All sugars not above No. 16 Dutch standard in color, molasses, coffee, tea, hides, and skins.

In section 3 of this law it is declared that these remissions of duty were made "with a view to secure reciprocal trade with countries producing" those articles; and it is provided that, whenever the President shall be satisfied that reciprocal favors are not granted to the products of the United States in the countries referred to, "he shall have the power and it shall be his duty" to impose upon the articles above enumerated, the products of the countries concerned, the rates of duty set forth in section 3.

The Government of the United States being earnestly desirous of maintaining with Spain and its colonies such trade relations as shall be reciprocally equal and mutually advantageous, I am directed by the President to request you to bring the above-mentioned provisions of this act of Congress to the attention of your Government, and to express the hope that you may be empowered to enter with me upon the consideration of the subject, with a view to the adjustment of the commercial relations between the two countries on a permanent basis of reciprocity profitable alike to both.

Accept, Sir, the renewed assurances of my highest consideration.

JAMES G. BLAINE.

Señor Don MIGUEL SUAREZ GUANES,
Etc., etc., etc.

SEÑOR SUAREZ GUANES TO MR. BLAINE.

LEGATION OF SPAIN AT WASHINGTON,
Washington, June 8, 1891.

The undersigned, Envoy Extraordinary and Minister Plenipotentiary of Spain, has the honor to inform the Honorable Secretary of State, in reply to his note of the 3d of January last, that his Government, desirous of strengthening and increasing the commercial relations between Spain and the United States of North America to the benefit of both countries, and being convinced that the community and harmony of their respective interests counsel that said relations should be stimulated and favored for the greater development and encouragement of their commerce, has decided to respond, as promptly and as fully as its national interests and international engagements permit, to the legislation of the Congress of the United States, as set forth in the note of January 3 above mentioned.

He has therefore been instructed to inform the Honorable Secretary of State that, in view of there having been decreed the free admission into the United States, from the 1st of April of the present year, of sugars, molasses, coffee, tea, and untanned hides, as a provisional measure, until a definitive arrangement between the United States and Spain shall be put in operation, and in reciprocity and compensation for the admission into the ports of the Union, free of all national, State, and municipal duties, of the products of Cuba and Porto Rico enumerated in the aforesaid note of the 3d of January last, the Government of Her Majesty is prepared to make use in part of the power granted to it by the law of the 22d of July, 1884, authorizing the admission into all the established ports of Cuba and Porto Rico, from the 1st day of September, 1891, of the articles or merchandise named in the transitory schedule annexed hereto; provided that the duties of the third column of the tariffs of the said islands, to which reference is made in said schedule, are understood to be those stated in the tariffs which are now in force, with the additional duties authorized by laws and orders previous to this date.

The necessary condition is imposed that said merchandise shall be the product or manufacture of the United States, and proceed directly from the ports of these States in the manner stated in the annexed schedule.

As provided in the same schedule, the benefit of the reduction of duties granted to American wheat and wheat-flour, on their introduction into the ports of Cuba and Porto Rico, shall not take effect until the 1st day of January, 1892.

Flour shall be excluded from said reduction, and shall not therefore share in it, which, on its departure from the ports of the Union, destined to those of Cuba and Porto Rico, may be favored with drawbacks or other tariff advantages.

The Government of Spain gives the assurance that, during the existence of this transitory arrangement, no export or port duty, whether national or provincial, shall be imposed on the articles or merchandise exported from Cuba and Porto Rico to the United States, and which the latter nation admits free of duties.

Respecting the North American articles of food, drink, and fuel specified in the annexed transitory schedule, which are imported into said islands, the Government of Spain, without restricting the rights of the municipal councils, will seek to have the latter impose upon them no greater municipal duties than those which national products pay, and that they shall not materially increase the price of said articles.

The Spanish Government reserves the right to propose the laws and adopt the regulations necessary to protect the customs revenues in said islands, to prevent fraud and require proof of the North American nationality of the articles enumerated in the annexed schedule. These laws and regulations shall not be unduly restrictive, nor create additional charges therefor, nor impose new duties on the articles imported.

What has just been stated will convince the President that the Government of Her Majesty responds to the legislation of the Congress of the United States in a spirit of sincere friendship and reciprocity, and, in this firm conviction, it has authorized the undersigned to conclude with that of the United

States the proper executive international agreement, which shall begin to take effect on the 1st day of September, 1891, and also to agree with the Honorable Secretary of State on the day when it shall be simultaneously and officially published in both countries, with the understanding that this commercial arrangement, put in operation under the clauses above stated, shall remain in force so long as it shall not be modified by the mutual agreemeent of the Executive Power of the two countries, always reserving the respective right of the Cortes of Spain and of the Congress of the United States to modify or repeal it whenever they may think proper.

The undersigned Minister gladly improves this opportunity to reiterate to the Honorable Secretary of State the assurances of his highest consideration.

M. SUAREZ GUANES.

The Honorable JAMES G. BLAINE,
Secretary of State of the United States.

TRANSITORY SCHEDULE.

Products or manufactures of the United States proceeding from the ports of said States to be admitted into Cuba and Porto Rico, on and after September 1, 1891, free of customs duties, and unloading and all other charges, whether national or provincial:

1. Meats, in brine, salted or smoked, bacon, hams, and meats preserved in cans, in lard or by extraction of air; jerked beef excepted.
2. Lard.
3. Tallow and other animal greases, melted or crude, unmanufactured.
4. Fish and shellfish, live, fresh, dried, in brine, smoked, pickled; oysters and salmon in cans.
5. Oats, barley, rye and buckwheat and flour of these cereals.
6. Starch, maizena and other alimentary products of corn, except corn meal.
7. Cotton seed, oil and mĕal cake of said seed for cattle.
8. Hay, straw for forage and bran.
9. Fruits, fresh, dried and preserved, except raisins.
10. Vegetables and garden products, fresh and dried.
11. Resin of pine, tar, pitch and turpentine.
12. Woods of all kinds, in trunks or logs, joists, rafters, planks, beams, boards, round or cylindric masts, although cut, planed and tongued and grooved, including flooring.
13. Woods for cooperage, including staves, headings and wooden hoops.

14. Wooden boxes, mounted or unmounted, except of cedar.

15. Woods, ordinary, manufactured into doors, frames, windows and shutters, without paint or varnish, and wooden houses, unmounted, without paint or varnish.

16. Wagons and carts for ordinary roads and agriculture.

17. Sewing machines.

18. Petroleum, raw or unrefined, according to the classification fixed in the existing orders for the importation of this article in said islands.

19. Coal, mineral.

20. Ice.

Products or manufactures of the United States, proceeding from the ports of said States, to be admitted into Cuba and Porto Rico, on and after September 1, 1891 (with the exceptions stated), on payment of the customs duties stated, being exempt from the unloading and all other charges, whether national or provincial:

21. Corn or maize, 25 cents per 100 kilogrammes.

22. Corn meal, 25 cents per 100 kilogrammes.

23. Wheat, from January 1, 1892, 30 cents per 100 kilogrammes.

24. Wheat-flour, from January 1, 1892, $1 per 100 kilogrammes.

It is to be understood that the packages or coverings in which the articles named in the two foregoing schedules are imported shall enter free of duty if they are usual and proper for the purpose.

Products or manufactures of the United States, proceeding from the ports of said States to be admitted into Cuba and Porto Rico, on and after September 1, 1891, at a reduction of 25 per centum of the duty fixed on each article in the third column of the customs tariff of said islands, or in the column in force in case said third column shall be substituted by another, which reduction shall be likewise applied to the unloading and all other duties which are imposed for the benefit of the nation or provinces on imported goods:

25. Butter and cheese.

26. Petroleum, refined.

27. Boots and shoes in whole or in part of leather or skins.

It is agreed that the duties of the third column of the tariffs of the islands of Cuba and Porto Rico mentioned in this schedule are understood to be those stated in the tariffs now in force, with the additional duties authorized by laws and orders previous to this date.

(Signed,) FABIÉ.

WASHINGTON, *June 8, 1891.*

A true copy.

M. SUAREZ GUANES.

MR. BLAINE TO SEÑOR SUAREZ GUANES.

DEPARTMENT OF STATE,
Washington, June 10, 1891.

SIR: I have great pleasure in acknowledging the receipt of your note of the 8th instant, in which you inform me that, as a provisional measure, until a more definitive arrangement shall be put in operation, the Government of Spain, in reciprocity and compensation for the admission into the ports of the United States, free from all national, State, or municipal duties, of the products of the Spanish islands of Cuba and Porto Rico enumerated in my note of January 3 last, is prepared by due legal enactment to authorize the free or favored admission into said islands, from September 1 next, of the articles proceeding directly from, and the product or manufacture of, the United States of America, named in the schedule attached to your note; that your Government gives the assurance that no export or port tax, whether national or provincial, shall be imposed on the articles admitted free into the United States; that it will seek to have no greater municipal duties than those paid by national products imposed on the articles named in said schedule, and that said duties shall not materially increase the price of said articles; and that the laws and regulations which may be adopted by Spain to prevent fraud shall not impose any additional charges therefor on the articles named in said schedule imported from the United States.

I am directed by the President to state to you that, as a provisional measure, he accepts this action of the Government of Spain, in proposing to grant exemption of duties to the products of the United States, as a due reciprocity for the action of the Congress of the United States, as set forth in my note to you of January 3 last.

I am also pleased to reciprocate the assurance contained in your note, and to state that no export tax, whether national, State, or municipal, can or will be imposed in the United States upon the products and manufactures enumerated in the schedule attached to your note of the 8th instant.

It may be further understood that, while the Government of the United States reserves the right to adopt such laws

and regulations as may be found necessary to protect the revenue and prevent fraud in the declarations and proof that the articles enumerated in my note of January 3 last, and whose free admission is provided for by the tariff law therein cited, are the product or manufacture of the islands of Cuba and Porto Rico, the laws and regulations to be adopted to that end shall place no undue restrictions on the importer nor impose any additional charges therefor upon the articles imported.

It is likewise understood that wheat-flour shall not share in the specified reduction of duties which begins to take effect January 1, 1892, which, on its exportation from the United States, may have been favored with any tariff advantages in the nature of drawbacks.

I have, therefore, to request that you will be so kind as to call at the Department of State at your early convenience to agree upon the time and manner of making public announcement of this transitory commercial arrangement, which, it is understood, shall remain in force so long as it shall not be modified by the mutual agreement of the Executive Power of the two countries, always reserving the respective right of the Congress of the United States and of the Cortes of Spain to modify or repeal said arrangement whenever they may think proper.

Accept, Sir, the renewed assurances of my highest consideration.

JAMES G. BLAINE.

Señor Don MIGUEL SUAREZ GUANES,

Etc., etc., etc.

SEÑOR SUAREZ GUANES TO MR. BLAINE.

LEGATION OF SPAIN AT WASHINGTON,

June 12, 1891.

The undersigned, Envoy Extraordinary and Minister Plenipotentiary of Spain, has the honor to inform the Honorable Secretary of State that, a transitory commercial arrangement having been agreed upon between the Government of His Majesty and that of the United States of North America,

which is to go into effect on the 1st day of September, 1891, and it being the desire of both Governments that said arrangement should have a definitive character from the time when Spain shall be free from her international engagements, the Government of His Majesty, in reciprocity and compensation for the admission into the ports of the United States of America, free of all national, State, and municipal duties, of the products of Cuba and Porto Rico enumerated in the note of the Honorable Secretary of State of the 3d of January of the present year, is prepared to make full use of the power granted to it by the law of the 22d of July, 1884, authorizing the admission into all the established ports of said islands, from the 1st of July, 1892, of the articles or merchandise named in the schedules annexed to this note, designated by the letters A, B, C, and D; provided that the duties of the third column of the tariffs of the islands of Cuba and Porto Rico, to which reference is made in said schedules, are understood to be those stated in the tariffs which are now in force, with the additional duties authorized by laws and orders previous to this date.

A necessary condition is imposed that said merchandise shall be the product or manufacture of the United States, and proceed directly from the ports of the Union in the manner stated in the annexed schedules.

The Government of Spain gives the assurance that, during the existence of the arrangement, no export or port duty, whether national or provincial, shall be imposed on the articles or merchandise which are exported from Cuba and Porto Rico to the United States, and which the latter nation admits free of duties.

Respecting the North American articles of food, drink, and fuel specified in the annexed schedules which are imported into said islands, the Government of His Majesty, without restricting the rights of the municipal councils, will seek to have the latter impose upon them no greater municipal taxes than those which national products pay, and that they shall not materially increase the price of said articles.

The Government of His Majesty reserves the right to propose the laws and adopt the regulations necessary to pro-

tect the customs revenues in the islands of Cuba and Porto Rico, to prevent fraud and require proof of the North American nationality of the articles enumerated in the annexed schedules. These laws shall not be unduly restrictive, nor create additional charges therefor, nor impose new duties on the articles imported.

A repertory shall be compiled to regulate the better application of the annexed schedules in the custom-houses of Cuba and Porto Rico, and as a basis for the classification of articles the repertory attached to the unratified treaty of October 18, 1884, shall be taken with such modifications as the present schedules require.

Flour which, on its departure from the ports of the Union for those of Cuba and Porto Rico, is favored with drawbacks or other tariff advantages is excluded from the reduction of duties conceded in the annexed schedules to American wheat and wheat-flour, and shall not share in said favor.

It is to be understood that, when this definitive commercial arrangement goes into effect, the transitory one shall terminate and be of no further force.

The definitive arrangement thus put in operation shall remain in force so long as it shall not be modified by the mutual agreement of the Executive Power of the two countries, always reserving the respective right of the Cortes of Spain and of the Congress of the United States to modify or repeal said arrangement whenever they may think proper.

The Governments of the two nations shall fix the day when this definitive arrangement shall be simultaneously and officially published in both countries.

In proposing in the name of his Government the project of the definitive commercial arrangement in the terms which he has just transcribed, it remains for the undersigned to comply with the special instruction which his Government has likewise given him, to submit to the consideration of the Honorable Secretary of State the serious injuries which have been occasioned to the tobacco production in the islands of Cuba and Porto Rico, in consequence of the increase of duties imposed on said article by the new tariff law of the United

States, cherishing the hope that, while it may not be possible to diminish them at once in the present arrangement, because the President of the Union has not the power to do so, the latter will exercise his constitutional powers in order to recommend to Congress the said reduction of duties on the tobacco of Cuba and Porto Rico.

These measures will duly complete the friendly character of the commercial relations between the two countries, for which purpose the Spanish Government has not hesitated to facilitate, as far as was within its power, the negotiation of the present reciprocity arrangement.

The undersigned Minister hopes, therefore, that the President will comply with these proper desires of the Government of His Majesty, and that the Secretary of State will respond to the same in a separate note, if possible, at the time he replies to the proposition for the arrangement contained in the present note, and he gladly improves this opportunity to repeat the assurances of his highest consideration.

(Signed,) M. SUAREZ GUANES.

To the Honorable JAMES G. BLAINE,
Secretary of State of the United States of America.

SCHEDULE A.

Products or manufactures of the United States proceeding from the ports of said States to be admitted into Cuba and Porto Rico, on and after July 1, 1892, free of customs duties, and unloading and all other charges, whether national or provincial:

1. Marble, jasper and alabaster natural or artificial, in rough or in pieces, dressed, squared and prepared for taking shape.

2. Other stones and earthy matters, including cement, employed in building, the arts and industries.

3. Waters, mineral or medicinal.

4. Ice.

5. Coal, mineral.

6. Resin, tar, pitch, turpentine, asphalt, schist and bitumen.

7. Petroleum, raw or crude, in accordance with the classification fixed in the tariff of said islands.

8. Clay, ordinary, in paving tiles large and small, bricks and roof tiles unglazed, for the construction of buildings, ovens and other similar purposes.

9. Gold and silver coin.

10. Iron, cast in pigs, and old iron and steel.

11. Iron, cast, in pipes, beams, rafters and similar articles, for the construction of buildings, and in ordinary manufactures. (See repertory.)

12. Iron, wrought, and steel, in bars, rails and bars of all kinds, plates, beams, rafters, and other similar articles for construction of buildings.

13. Iron, wrought, and steel, in wire, nails, screws, nuts, and pipes.

14. Iron, wrought, and steel, in ordinary manufactures and wire cloth unmanufactured. (See repertory.)

15. Cotton, raw, with or without seed.

16. Cotton seed, oil and meal cake of same for cattle.

17. Tallow and all other animal greases, melted or crude, unmanufactured.

18. Books and pamphlets, printed, bound and unbound.

19. Woods of all kinds, in trunks or logs, joists, rafters, planks, beams, boards and round or cylindric masts, although cut, planed, tongued and grooved, including flooring.

20. Wooden cooperage, including staves, headings and wooden hoops.

21. Wooden boxes, mounted or unmounted, except of cedar.

22. Woods, ordinary, manufactured into doors, frames, windows and shutters, without paint or varnish, and wooden houses, unmounted, without paint or varnish.

23. Woods, ordinary, manufactured into all kinds of articles turned or unturned, painted or varnished, except furniture. (See repertory.)

24. Manures, natural or artificial.

25. Implements, utensils and tools for agriculture, the arts and mechanical trades.

26. Machines and apparatus, agricultural, motive, industrial and scientific, of all classes and materials, and loose pieces for the same, including wagons, carts and handcarts for ordinary roads and agriculture.

27. Material and articles for public works, such as railroads, tramways, roads, canals for irrigation and navigation, use of waters, ports, lighthouses, and civil construction of general utility, when introduced by authorization of the Government, or if free admission is obtained in accordance with local laws.

28. Materials of all classes for the construction, repair in whole or in part of vessels, subject to specific regulations to avoid abuse in the importation.

29. Meats, in brine, salted and smoked, including bacon, hams, and meats preserved in cans, in lard or by extraction of air; jerked beef excepted.

30. Lard and butter.

31. Cheese.

32. Fish and shellfish, live, fresh, dried, in brine, salted, smoked and pickled; oysters and salmon in cans.

33. Oats, barley, rye and buckwheat, and flour of these cereals.

34. Starch, maizena and other alimentary products of corn, except corn meal.

35. Fruits, fresh, dried and preserved, except raisins.

36. Vegetables and garden products, fresh and dried.

37. Hay, straw for forage and bran.
38. Trees, plants, shrubs and garden seeds.
39. Tan bark.

(Signed,) FABIÉ.

WASHINGTON, *June 12, 1891.*

A true copy.

M. SUAREZ GUANES.

SCHEDULE B.

Products or manufactures of the United States proceeding from the ports of said States to be admitted into Cuba and Porto Rico, on and after July 1, 1892, on payment of the customs duties stated, being exempt from the unloading and all other charges, whether national or provincial:

40. Corn or maize, 25 cents per 100 kilogrammes.
41. Corn meal, 25 cents per 100 kilogrammes.
42. Wheat, 30 cents per 100 kilogrammes.
43. Wheat-flour, $1 per 100 kilogrammes.
44. Carriages, cars and other vehicles for railroads or tramways, where authorization of the Government for free admission has not been obtained, 1 per centum ad valorem.

It is to be understood that the packages or coverings in which the articles named in the foregoing schedules, A and B, are imported shall be free of duty if they are usual and proper for the purpose.

(Signed,) FABIÉ.

WASHINGTON, *June 12, 1891.*

A true copy.

M. SUAREZ GUANES.

SCHEDULE C.

Products or manufactures of the United States proceeding from the ports of said States to be admitted into Cuba and Porto Rico, on and after July 1, 1892, at a reduction of 50 per centum of the duty fixed on each article in the third column of the customs tariff of the said islands or in the column in force, in case said third column shall be substituted by another, which reduction shall be likewise applied to the unloading and all other duties which are imposed for the benefit of the nation or provinces on imported goods:

45. Marble, jasper and alabaster, of all kinds, cut into flags, slabs or steps, and the same worked or carved in all kinds of articles polished or not.
46. Glass and crystal ware, plate and window glass, and the same silvered, quicksilvered and platinized.
47. Clay in tiles, large and small, and mosaic for pavements, colored tiles, roof tiles glazed and pipes.

48. Stoneware and fine earthenware, and porcelain.

49. Iron, cast, in fine manufactures or those polished, with coating of porcelain or part of other metals. (See repertory.)

50. Iron, wrought, and steel, in axles, tires, springs and wheels for carriages, rivets and their washers.

51. Iron, wrought, and steel, in fine manufactures or those polished, with coating of porcelain or part of other metals, not expressly comprised in other numbers of these schedules, and platform scales for weighing. (See repertory.)

52. Needles, pens, knives, table and carving, razors, penknives, scissors, pieces for watches and other similar articles of iron and steel.

53. Tin plate in sheets or manufactured.

54. Copper, bronze, brass and nickel, and alloys of same with common metals, in lump or bars, and all manufactures of the same.

55. All other common metals and alloys of the same, in lump or bars, and all manufactures of the same, plain, varnished, gilt, silvered or nickeled.

56. Furniture of all kinds, of wood or metal; including school furniture, blackboards and other materials for schools, and all kinds of articles of fine woods not expressly comprised in other numbers of these schedules. (See repertory.)

57. Rushes, esparto, vegetable hair, broom corn, willow, straw, palm, and other similar materials, manufactured into articles of all kinds.

58. Pastes for soups, rice flour, bread and crackers, and alimentary farinas, not comprised in other numbers of these schedules.

59. Preserved alimentary substances and canned goods, not comprised in other numbers of these schedules, including sausages, stuffed meats, mustards, sauces, pickles, jams and jellies.

60. Rubber and gutta-percha, and manufactures thereof, alone or mixed with other substances (except silk), and oilcloths and tarpaulin.

61. Rice, hulled or unhulled.

It is agreed that the duties of the third column of the tariffs of the islands of Cuba and Porto Rico mentioned in this schedule are understood to be those stated in the tariffs now in force, with the additional duties authorized by laws and orders previous to this date.

(Signed,) FABIÉ.

WASHINGTON, *June 12, 1891.*

A true copy.

M. SUAREZ GUANES.

SCHEDULE D.

Products or manufactures of the United States proceeding from the ports of said States to be admitted into Cuba and Porto Rico, on and after July 1, 1892, at a reduction of 25 per centum of the duty fixed on the respective article in the third column of the customs tariff of said islands or in the

column in force, in case said third column shall be substituted by another, which reduction shall be likewise applied to the unloading and all other duties which are imposed for the benefit of the nation or provinces on imported goods:

62. Petroleum, refined, and benzine.

63. Cotton manufactured, spun or twisted, and in goods of all kinds, woven or knit, and the same mixed with other vegetables or animal fibers in which cotton is an equal or greater component part, and clothing exclusively of cotton.

64. Rope, cordage, and twine of all kinds.

65. Colors, crude and prepared, with or without oil, inks of all kinds, shoe blacking and varnishes.

66. Soap, toilet, and perfumery.

67. Medicines, proprietary or patent and all others, and drugs.

68. Stearine and tallow manufactured in candles.

69. Paper for printing, for decorating rooms, of wood or straw for wrapping and packing, and bags and boxes of same, sandpaper and pasteboard.

70. Leather and skins, tanned, dressed, varnished or japanned, of all kinds, including sole leather or belting.

71. Boots and shoes in whole or in part of leather or skins.

72. Trunks, valises, traveling bags, portfolios and other similar articles in whole or in part of leather.

73. Harness and saddlery of all kinds.

74. Watches and clocks, of gold, silver or other metals, with cases of stone, wood, or other material, plain or ornamented.

75. Carriages of two or four wheels and pieces of the same.

It is agreed that the duties of the third column of the tariffs of the islands of Cuba and Porto Rico mentioned in this schedule are understood to be those stated in the tariffs now in force, with the additional duties authorized by laws and orders previous to this date.

(Signed,) FABIÉ.

WASHINGTON, *June 12, 1891.*

A true copy.

M. SUAREZ GUANES.

MR. BLAINE TO SEÑOR SUAREZ GUANES.

DEPARTMENT OF STATE,

Washington, June 16, 1891.

SIR: Having already had the honor to enter with you upon a transitory commercial arrangement between the United States and the islands of Cuba and Porto Rico, to go into

effect September 1 next, I now have the pleasure to acknowledge the receipt of your note of the 12th instant, in which you inform me that, with the object of giving a definitive character to said commercial arrangement, the Government of Spain, in reciprocity and compensation for the admission into the ports of the United States of America, free from all national, State, and municipal duties, of the products of Cuba and Porto Rico enumerated in my note of January 3 last, is prepared by due legal enactment to authorize the admission into said islands, from July 1, 1892, of the articles or merchandise named in the schedules annexed to your note of the 12th instant, on the conditions stated in said note and schedules; that your Government gives the assurance that no export or port tax, whether national or provincial, shall be imposed on the articles admitted free into the United States; that it will seek to have no greater municipal duties than those paid by national products imposed on the articles named in said schedules, and that said duties shall not materially increase the price of said articles; and that the laws and regulations which may be adopted by Spain to prevent fraud shall not impose any additional charges therefor on the articles named in said schedules imported from the United States.

I am directed by the President to state that he accepts this action of the Government of Spain, in proposing to grant exemption of duties to the products of the United States, as a due reciprocity for the action of the Congress of the United States, as set forth in my note to you of January 3d last.

I am also pleased to reciprocate the assurance contained in your note, and to state that no export tax, whether national, State, or municipal, can or will be imposed in the United States upon the products and manufactures enumerated in the schedules attached to your note of the 12th instant.

It may be further understood that, while the Government of the United States reserves the right to adopt such laws and regulations as may be found necessary to protect the revenue and prevent fraud in the declarations and proof that the articles enumerated in my note of January 3 last, and whose free

admission is provided for by the tariff law therein cited, are the product or manufacture of the islands of Cuba and Porto Rico, the laws and regulations to be adopted to that end shall place no undue restrictions on the importer, nor impose any additional charges therefor upon the articles imported.

It is likewise understood that wheat-flour shall not share in the reduction of duties specified in Schedule B attached to your note of the 12th instant, which, on its exportation from the United States, may have been favored with any tariff advantages in the nature of drawbacks.

It is agreed that a repertory shall be compiled before the present commercial arrangement goes into force, under the joint supervision of the Department of State and the Spanish Legation in Washington, to regulate the better application of the said schedules in the custom-houses of Cuba and Porto Rico upon the basis stated in your note.

It is also agreed that, when this definitive commercial arrangement goes into effect, the transitory arrangement to be put in operation September 1 next shall terminate and be of no further force.

I have, therefore, to request that you will call at the Department of State at your early convenience to agree upon the time and manner of making public announcement of this definitive commercial arrangement, which, it is understood, shall remain in force so long as it shall not be modified by the mutual agreement of the Executive Power of the two countries, always reserving the respective right of the Congress of the United States and of the Cortes of Spain to modify or repeal said arrangement whenever they may think proper.

In conclusion, I am directed by the President to state that the suggestion contained in your note respecting tobacco shall have his careful consideration, and that it shall be made the subject of a separate note.

I improve the opportunity to offer to you, Sir, the renewed assurances of my highest consideration.

JAMES G. BLAINE.

Señor Don MIGUEL SUAREZ GUANES,

Etc., etc., etc.

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REPORTS

FROM THE

CONSULS OF THE UNITED STATES.

No. 131.—AUGUST, 1891.

ISSUED FROM THE BUREAU OF STATISTICS, DEPARTMENT OF STATE.
ALL REQUESTS FOR THESE REPORTS SHOULD BE ADDRESSED TO THE SECRETARY OF STATE.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1891.

CONSULAR REPORTS

ON

COMMERCE, MANUFACTURES, ETC.

No. 131.—AUGUST, 1891.

COMMERCE AND INDUSTRIES OF AUSTRIA-HUNGARY.

REPORT BY CONSUL-GENERAL GOLDSCHMIDT, OF VIENNA.

In obedience to instructions, the undersigned begs to submit the annual report on the agriculture, industries, and commerce of Austria-Hungary for the year 1889 and such portions of 1890 for which it has been found possible to procure reliable statistical data.

GOVERNMENT AND PEOPLE.

The Empire of Austria-Hungary is a bipartite state composed of the Empire of Austria, or Cisleithania, and the Kingdom of Hungary, or Transleithania, each having its own parliament and relative independence of legislation.

By the State compromise of 1867 the Monarchy was divided into two parts with equal rights—the Empire of Austria (Cisleithania) and Kingdom of Hungary (Transleithania)—which have common interests and administration only in the representation of the Monarchy abroad and in the army and navy. All other branches of administration and legislation are carried on by the two parts of the realm entirely and strictly independent of each other.

The occupied provinces of Bosnia and Herzegovina have their own military administration, those territories being occupied according to the treaty of Berlin (1878).

The Empire of Austria embraces within its borders the following seventeen crown lands: (1) Archduchy of Austria below the Enns, (2) archduchy of Austria above the Enns, (3) duchy of Salzburg, (4) duchy of Styria, (5) duchy of Carinthia, (6) duchy of Carniola, (7) city of Trieste and its domain, (8) margraviate of Göritz and Gradiska, (9) margraviate of Istria, (10) margraviate of Tyrol, (11) dependency of Vorarlberg, (12) Kingdom

of Bohemia, (13) margraviate of Moravia, (14) duchy of Silesia, (15) Kingdom of Galicia, (16) Kingdom of Dalmatia, (17) duchy of Bukowina.

Austria is the home of a conglomeration of separate races and nationalities. Its 22,000,000 inhabitants speak the following languages, besides various idioms: German, Czech, Polish, Ruthenian, Slavonian, Italian, Croatian, and Hungarian.

These numerous heterogeneous elements have, of course, their own habits, traditions, and ambitions, but lack the national unity which characterizes other countries or nations composed of elements speaking the same language and belonging to the same race.

However, all Austrians unite in enthusiasm for the reigning house of Hapsburg and fidelity to the Crown; but among the different nationalities there is constant warfare. The two most powerful factions, the Germans and Bohemians, are waging war with a determination and vigor which shakes the Empire to its very foundation. It requires more than ordinary statesmanship to satisfy the demands of the Czechs, who bitterly hate the Germans, and who are striving to obtain predominance in the Empire, and are dreaming of a kingdom with the Emperor as their crowned king. The Germans, on the other hand, are acting moderately, wisely, and in harmony with the Government.

While in Bohemia the principle is contested whether the predomination of the German character of hundreds of years standing shall be continued to be upheld in the administration of the State, or whether it is to be transformed into a Slavic particularistic administration, there are at the same time going on the conflicts in Styria and in Carniola, those between the Ruthenians and Poles in Galicia, and between the Germans, Slavs, and Italians in Trieste, in the coast district, and in Tyrol, which not only are continued with unabated and increasing animosity, but have led to feuds between the Czechs themselves, carried on no less bitterly than are those between the Czechs and Germans.

The majority of the Czechs repudiate the so-called "Ausgleich," *i. e.*, the amicable settlement so urgently and earnestly suggested by the Emperor and his Government. Added to these are the anti-Semitic agitations, which, creating passion and hatred, can not but be a danger and a shame to any civilized nation.

A centralization of power seems almost impossible in Austria, and to form and maintain one nation out of these heterogeneous elements is proving no light task for the ruling statesmen of Austria.

Not so in the Kingdom of Hungary, whose political and economic interests oftentimes seem to clash with those of Austria. Hungary is following a course of rigid centralization, and is trying hard to train its entire population, which is speaking several languages, to become patriotic Magyars.

In Austria we find a marked preponderance of agrarian interests, supported by the strong influence enjoyed by the high nobility by right of constitution, in the representative bodies, the Diet and Parliament; in Hungary,

the most careful fostering of the development of the cities and industries and a desire of strengthening the dominating position of the Magyar element; in Austria, tender care and favors granted the feudals and clerics, and preference shown the nobility in the appointments to the higher Government positions; in Hungary, a decidedly liberal Government, which, without regard to title or religion, grants positions to the most qualified and deserving and strives to promote liberalism and justice by honestly and conscientiously suppressing the hatred of caste, race, and religion.

The Hungarian Crown embraces the Kingdom of Hungary, the grand principality of Transylvania, the city of Fiume and its domain, and the Kingdom of Croatia and Slavonia and military boundary.

AREA AND POPULATION.

The total area of Austria is 300,024.38 square kilometres; that of Hungary, 322,285.3 square kilometres; and of Bosnia and Herzegovina, 53,677 square kilometres; making a total of 675,946.41 square kilometres, or 261,998.61 square miles.

The total population of Austria, according to the last census,* taken on December 31, 1880, was 22,144,244; that of Hungary by the same census was 15,738,468; and that of Bosnia and Herzegovina was 1,142,147; making a total population for the Empire of Austria-Hungary of 39,024,859.

The following table shows the population of the various crown lands of Austria in 1888:

Crown lands.	Population.		
	Male.	Female.	Total.
Lower Austria	1,250,774	1,341,175	2,591,949
Upper Austria	380,108	395,611	775,719
Salzburg	84,159	86,542	170,701
Styria	625,054	644,866	1,269,920
Carinthia	174,351	184,770	359,121
Carniola	238,154	261,677	499,831
Trieste and domain	74,941	82,519	157,460
Göritz and Gradiska	110,335	108,340	218,875
Istria	158,321	151,974	310,295
Tyrol	393,520	413,945	807,465
Vorarlberg	54,516	56,386	110,902
Bohemia	2,778,982	3,001,956	5,780,938
Moravia	1,053,905	1,168,465	2,222,370
Silesia	280,068	314,505	594,573
Galicia	3,158,149	3,297,736	6,455,885
Bukowina	317,537	319,816	637,353
Dalmatia	261,239	260,399	521,638
Total civil population	11,394,313	12,090,682	23,484,995
Standing army	158,693	.....	158,693
Reserve army	3,730	.....	3,730
Grand total	11,556,736	12,090,682	23,647,418

*The Austro-Hungarian census of December 31, 1890, will be shortly published.

The population of Hungary in 1887 was computed at 17,080,000.

It is worthy of remark that the total area of the Austro-Hungarian Monarchy, including the occupied Turkish provinces of Bosnia and Herzegovina, is, next to Russia, the largest country of Europe; but it is only third in population, the Empires of Russia and Germany numbering more inhabitants. The area of Austria-Hungary is 13,000 square miles less than that of Texas.

RESOURCES AND TRADE.

Austria-Hungary is a country of great resources. Her soil is rich and yields large crops; her mines produce large quantities of iron, coal, salt, and precious metals. Her manufactures and industries, however, like those of all the civilized world, suffer from overproduction, and her products hang heavily upon the market, as there can not be found consumers enough to dispose of them. The restricted interchange of goods between the different nations of the European continent and the protective tariff of our own country contribute to prevent the free development of the trade of this Empire, which largely depends upon export. Competition, too, has become a great factor herein. Although the volume of trade has not decreased, profits, in general, have dwindled, and business is not in a satisfactory condition. Taxes are high, and the expense of keeping the present active military force of 2,000,000 men, costing over 130,000,000 florins annually, is heavy, and trade and manufactures feel the burden.

England invades the eastern markets heretofore tributary to Austria, in order to make up for her decrease of export to the United States. Public opinion is greatly agitated by the effect which our new tariff law has had on one particular branch of industry—the pearl-button trade—although a great part of the business in that line will eventually be regained in spite of the high tariff.

The monetary complication with which Austria-Hungary is threatened, in consequence of the silver policy of the United States, should induce the Government to take prompt action with regard to the settlement of the money question, and to do away with its fluctuating currency, which hampers export business to a great extent. Negotiations are now pending between the secretaries of finance of the two countries.

Austria-Hungary and Germany are at present deliberating with regard to a tariff treaty, without France participating. It seems to be a very difficult task, Germany having conceded to France by the Frankfort treaty the perpetual right of the most favored nation. An Austro-German-Italian customs union appears to be in view, and, within that union, commercial confederacy, and a prohibitive tariff for all countries outside of it.

UNITED STATES CONSULAR DISTRICTS.

Prague and Reichenberg.—These consular districts comprise the Kingdom of Bohemia, covering an area of 51,956 square kilometres. The Kingdom is possessed of a fertile soil yielding fair, average crops, and of rich mines

producing immense quantities of coal and iron. The character of the population, however, is essentially industrial, and the wares manufactured there find their way to every chief market of the world. The value of the articles exported to the United States during the year 1889–'90 was, for the consular district of Prague, $6,251,455; for the consular district of Reichenberg, $1,086,017. These exports consisted chiefly of the following articles:

Articles.	Prague.	Reichenberg.
Beet-root sugar	$3,584,508	.....
Porcelain and pottery	637,561	$51,669
Glassware	375,744	466,126
Buttons	207,129	125,588
Gloves	166,299	.....
Linen and cotton goods	180,525	110,609
Silks and velvets	136,397	.....
Bed feathers	116,415	.....
Cloth and woolen goods	103,090	14,240
Pulp	99,992	.....
Fancy goods and jewelry	36,588	294,740

Buda-Pesth.—The consular district of Buda-Pesth comprises the whole of Hungary, with the exception of Fiume, and is almost exclusively an agricultural state. Although every effort is being made on the part of the Hungarian Government to foster trade and industries, the latter are still in the very beginning of their struggle for existence. The value of the goods exported from this consular district to the United States in the year 1889–'90 was $535,095, of which the chief articles were as follows:

Articles.	Value.	Articles.	Value.
Beans and lentils	$126,515	Tartar, crude	$15,110
Fruits, dried	124,023	Glassware	13,324
Mineral waters	92,528	Argols	11,178
Wines and liquors	77,173	Herbs, roots, and leaves	7,861
Brushes and bristles	22,696	Leather and skins	4,487
Porcelain and pottery	19,175	Baskets and basket ware	2,416

None of the other articles exported to the United States reached the sum of $1,000.

Trieste.—This consular district, which, in spite of all the efforts made during the last two decades, could not make any progress, will shortly cease to be a free port of entry, as the Government has placed a bill before the Parliament by which it is contemplated to combine Trieste with the customs district of Austria-Hungary by the 1st of July. It is thought that by the granting of certain concessions, in the form of differential duties less than those of the general tariff on wares entering or leaving Trieste, the traffic of the only seaport of Austria will become more prosperous. Trieste is situated off the great sea road leading from the west to the Indian Ocean by way of the Suez Canal. There are no steam lines connecting it with the United

States. Hitherto every increase of traffic at Fiume meant a loss to that of Trieste. The total value of the goods exported from Trieste to the United States during 1889–'90 was $1,795,919. The chief articles and their value were as follows: Dried fruits, $1,220,262; insect powder and flowers, $125,830; beans and lentils, $107,496; gum, $105,942; leather and skins, $51,170; herbs, roots, and leaves, $39,287; and oils and paints, $21,438.

Vienna.—Vienna, the capital of Austria, is the third city in size on the continent of Europe.* Great hopes of a revival of the trade and commerce are attached to a new law recently passed, which creates one large commonwealth by uniting Vienna and its suburbs, that is to say, the octroi line which separated Vienna from its suburbs will now encircle both the city and its suburbs, and both will be placed under one common municipal government. There is no doubt that trades and industries will profit greatly by that measure, as new buildings will spring up, and a city railroad will connect the suburbs with the city and facilitate communication. The total export from Vienna to the United States in 1889–'90 represented the sum of $4,688,738, the chief articles and their values being buttons, $1,786,651; linen and cotton, $675,391; silks and velvets, $275,636; fans, $227,320; smokers' articles, $168,131; argols, $130,207; cloth and woolen goods, $158,697; furniture, $111,899; pulps, $105,791; fancy goods and jewelry, $127,964; glassware, $98,854; leather and skins, $96,984; beans and lentils, $70,277; metal ware, $68,139; meerschaum (crude), $64,342; umbrella fixtures, $62,718.

AUSTRO-HUNGARIAN AGRICULTURE.

The total area under cultivation for the four principal kinds of grain (wheat, rye, barley, and oats) in Austria-Hungary in 1889 and 1890 is officially reported at 12,533,654 hectares†—6,137,625 in Austria and 6,396,029 in Hungary—divided for the principal grains in the two realms as follows:

Table showing the acreage under crops in Austria-Hungary.

Grain.	Austria.	Hungary.	Total.
	Hectares.	*Hectares.*	*Hectares.*
Wheat	1,174,024	3,032,632	4,206,656
Rye	1,973,292	1,185,182	3,158,474
Barley	1,109,824	1,048,842	2,158,666
Oats	1,180,485	1,129,373	3,009,858
Total	6,137,625	6,396,029	12,533,654

*Her industries are touched upon under the head of "trade and industries."

†1 hectare=2.471 acres.

The total yield of the chief grain crops for 1889 amounted to 133,473,339 metre centners (1 metre cenner=221⅓ pounds), representing a value of 551,591,789 florins, distributed as follows:

Table showing the Austro-Hungarian crop product.

Grain.	Austria.*		Hungary.	
	Quantity.	Value.	Quantity.	Value.
	Metre cent.	*Florins.*	*Metre cent.*	*Florins.*
Wheat	10,197,920	43,801,500	25,235,886	197,397,468
Rye	17,557,080	67,728,000	10,692,703	67,010,907
Barley	10,343,990	45,731,200	7,695,855	49,681,653
Oats	12,713,650	47,061,300	6,718,835	37,179,759
Total	50,812,640	204,322,000	50,343,279	351,269,786

*From the official reports of the agricultural ministry for Austria, which comprise the following crown lands: Bohemia, West Galicia, Upper Austria, Salzburg, Carinthia, Carniola, South Tyrol, Göritz and Gradiska, and Istria.

CROP PRODUCTS OF AUSTRIA.

Table showing the area for the different crops in the several crown lands in 1889.

Products.	Moravia.	Silesia.	Galicia.		Bukowina.
			West.	East.	
	Hectares.	*Hectares.*	*Hectares.*	*Hectares.*	*Hectares.*
Wheat	103,602	15,548	138,400	254,234	18,979
Rye	247,884	50,791	208,880	385,811	36,067
Barley	170,152	26,618	125,953	249,985	37,810
Oats	213,829	57,667	251,384	448,177	46,135
Maize	9,484	.....	.....	107,391	78,085
Millet	7,880	.....	4,291	26,843	1,665
Beans, peas, and lentils	32,235	4,570	28,412	112,478	3,745
Maslin	1,476	.....	.....	.....	.....
Buckwheat	2,858	885	8,638	91,422	5,316
Rape	3,207	888	3,961	7,034	248
Poppy	1,858	.....	.....	.....	.....
Anise and fennel	424	.....	.....	.....	675
Flax	13,274	1,832	12,119	14,458	1,248
Hemp	1,151	.....	5,292	30,685	5,219
Tobacco	.....	.....	.....	1,791	294
Potatoes	162,545	38,206	146,393	252,012	20,964
Beets:					
Sugar	69,660	4,117	4,685	.....	.....
Fodder	17,717	1,918	19,001	12,534	510
Cabbage	7,285	1,414	14,917	19,161	69
Pumpkins	.....	.....	.....	.....	1,376
Nursery plants and green vegetables	2,453	.....	.....	.....	.....
Hay, clover	78,622	40,720	124,784	94,271	11,394
Clover seed	5,150	988	4,620	10,399	645
Vetch mixture, etc.	15,709	2,995	23,582	58,661	.....
Fallows	55,398	5,690	81,119	433,165	18,652
Meadows (proper)	155,362	30,127	179,677	465,138	132,552
Hops	291	.....	217	1,402	.....
Vineyards	12,134	.....	.....	.....	56

Table showing the area for the different crops in the several crown lands in 1889—Continued.

Products.	Lower Austria.	Upper Austria.	Salzburg.	Styria.	Carinthia.
	Hectares.	*Hectares.*	*Hectares.*	*Hectares.*	*Hectares.*
Wheat	88,496	52,048	7,576	62,093	15,910
Rye	196,373	95,938	11,111	76,290	39,825
Barley	54,980	42,836	1,714	15,587	10,377
Oats	185,345	80,081	9,203	76,132	26,231
Maize	10,705	.....	.....	37,583	7,889
Millet	.....	.....	.....	9,018	2,237
Beans, peas, and lentils	5,449	205	304	12,450	3,388
Maslin	.....	14,087	.....	.....	826
Buckwheat:					
First crop	3,442	13	.....	140	318
Second crop	.....	118	.....	52,065	14,300
Rape	420	2,090	.....	540	.....
Poppy	207	.....	.....	.....	.....
Flax	1,813	4,307	396	8,700	1,511
Hemp	.....	584	64	1,309	695
Chicory	178	.....	.....	.....	.....
Potatoes	50,888	16,355	878	23,897	7,823
Beets:					
Sugar	2,578	.....	.....	.....	.....
Fodder—					
First crop	23,714	2,478	80	2,002	350
Second crop	.....	5,752	167	29,445	6,492
Cabbage:					
First crop	6,043	3,931	615	5,346	795
Second crop	.....	640	.....	.....	.....
Pumpkins	.....	.....	.....	2,604	.....
Nursery plants and green vegetables	500	.....	.....	935	.....
Hay, clover	66,055	58,901	2,921	32,717	15,376
Clover seed:					
First crop	.....	126	139	787	.....
Second crop	3,604	1,735	.....	4,909	1,252
Vetch mixture, etc.:					
First crop	8,431	1,355	.....	878	608
Second crop	.....	2,006	.....	3,904	1,505
Orchards	6,912	6,759	27,741	50,954	7,379
Fallows	147,911	37,954	2,879	1,451	11
Meadows (proper)	229,886	222,251	59,531	266,978	105,129
Hops	.....	676	.....	1,626	10
Vineyards	39,713	.....	.....	34,056	54

Table showing the area for the different crops in the several crown lands in 1889—Continued.

Products.	Carniola.	Tyrol.		Vorarlberg.	Bohemia.
		North.	South.		
	Hectares.	*Hectares.*	*Hectares.*	*Hectares.*	*Hectares.*
Wheat	20,950	6,652	9,867	611	244,355
Spelt	.....	.....	.....	847	.....
Rye	17,288	13,064	13,183	283	568,939
Barley	15,141	6,039	3,660	474	344,066
Oats	18,757	4,891	1,740	550	448,665
Maize:					
First crop	15,223	3,152	17,035	1,766	.....
Second crop	.....	.....	3,245	.....	.....
Millet	11,178	.....	8	.....	628
Beans, peas, and lentils	3,205	1,364	1,173	.....	58,273
Maslin	.....	.....	206	.....	.....
Buckwheat:					
First crop	846	.....	72	.....	.....
Second crop	21,890	1,327	6,600	.....	.....
Rape	.....	.....	.....	.....	18,316
Poppy	.....	.....	18	.....	2,011
Flax	1,608	2,138	327	15	28,510
Hemp	533	21	258	56	81
Chicory	.....	.....	.....	.....	1,758
Tobacco	.....	.....	446	.....	.....
Potatoes	22,283	4,562	5,943	2,480	335,756
Beets:					
Sugar	.....	.....	.....	.....	144,406
Fodder—					
First crop	456	.....	17	240	19,869
Second crop	13,420	2,517	3,045	.....	.....
Cabbage	2,320	266	586	156	12,690
Nursery plants and green vegetables	259	.....	503	.....	2,209
Hay (clover):					
First crop	16,995	1,925	2,291	83	266,515
Second crop	.....	.....	2,217	.....	.....
Clover seed:					
First crop	.....	.....	.....	.....	474
Second crop	1,212	.....	.....	.....	12,476
Vetch mixture, etc.:					
First crop	341	.....	.....	.....	49,270
Second crop	.....	80	.....	.....	.....
Orchards	.....	35,282	55	.....	.....
Fallows	.....	.....	4	97	78,314
Meadows:					
Proper	171,200	86,374	70,224	35,973	522,014
Alpine	.....	80,875	53,180	.....	.....
Hops	.....	.....	.....	.....	10,200
Vineyards	11,631	262	16,577	244	858
Chestnuts	.....	.....	890	.....	.....
Olive land	.....	.....	256	.....	.....
Mulberry trees	.....	.....	5,345	.....	.....

Table showing the area for the different crops in the several crown lands in 1889—Continued.

Products.	Görtz and Gradiska.	Trieste.	Istria.	Dalmatia.	Total.
	Hectares.	*Hectares.*	*Hectares.*	*Hectares.*	*Hectares.*
Wheat	11,809	116	16,400	26,810	1,094,456
Spelt	500	4	3,473	2,040	6,864
Rye	1,529	137	3,498	4,685	1,972,576
Barley	3,355	107	8,915	20,555	1,138,324
Oats	1,076	.....	4,152	3,470	1,877,485
Maize:					
First crop	14,030	319	20,328	47,540	370,530
Second crop	5,464	.....	926	1,730	11,365
Millet:					
First crop	106	.....	.....	6,730	70,584
Second crop	.....	.....	730	.....	730
Sorghum	260	.....	2,383	1,370	4,013
Beans, peas, and lentils	1,141	37	1,253	2,285	271,967
Maslin	.....	.....	.....	4,610	21,205
Buckwheat:					
First crop	100	.....	.....	.....	114,050
Second crop	5,511	210	807	.....	102,828
Rape	79	.....	.....	.....	37,080
Poppy	.....	.....	.....	.....	4,088
Anise and fennel	.....	.....	.....	.....	1,099
Flax	96	.....	.....	.....	92,352
Hemp	253	.....	.....	.....	46,101
Chicory	.....	.....	.....	.....	1,936
Tobacco	.....	.....	.....	126	2,657
Chrysanthemum	.....	.....	.....	1,780	1,780
Potatoes	2,690	30	2,573	3,260	1,099,538
Beets:					
Sugar	.....	.....	.....	.....	225,446
Fodder—					
First crop	.....	.....	.....	152	101,038
Second crop	2,010	63	462	.....	.....
Cabbage:					
First crop	207	.....	496	905	77,202
Second crop	.....	.....	.....	.....	640
Pumpkins	.....	.....	.....	.....	3,980
Nursery plants and green vegetables:					
First crop	535	.....	.....	1,208	8,602
Second crop	458	16	250	.....	724
Hay (clover):					
First crop	1,602	17	428	185	815,802
Second crop	.....	.....	.....	.....	2,217
Clover seed:					
First crop	.....	.....	.....	.....	1,526
Second crop	70	.....	45	.....	.....
Vetch mixture, etc.:					
First crop	760	.....	.....	.....	162,590
Second crop	.....	35	429	.....	7,959
Orchards	.....	.....	.....	.....	135,082
Fallows	224	1	1,109	5,166	869,145
Meadows:					
Proper	59,824	1,129	33,823	9,872	2,837,064
Alpine	.....	.....	.....	.....	134,055
Hops	.....	.....	.....	.....	14,422
Rice	598	.....	.....	.....	.....
Vineyards	9,882	1,087	35,731	72,256	234,541
Chestnuts	262	3	250	53	1,458
Olive land	19	41	14,627	31,992	46,935
Mulberry trees	805	2	434	503	7,089

The total acreage of Austria in 1889, as reported by the department of agriculture, was 10,632,232 hectares (1 hectare=2.47 acres), which were cultivated for the several products as follows:

Table showing the acreage and crop of the chief agricultural products of Austria in 1889, as compared with 1888.

Products.	Yield.			Area.
	1889.	1888.	Increase or decrease in 1889.	
				Hectares.
Wheat ....hectolitres*	13,524,830	18,270,820	— 4,745,990	1,094,456
Rye....do	29,944,800	28,747,410	— 3,802,610	1,971,576
Barley....do	16,136,550	20,210,150	— 4,073,600	1,138,324
Oats....do	28,523,880	37,080,610	— 8,556,730	1,877,485
Maize....do	5,806,050	5,845,150	— 39,100	370,530
Spelt....do	97,130	79,664	+ 17,466	6,864
Millet....do	944,810	961,024	— 16,214	70,584
Peas and beans....do	2,435,415	2,798,904	— 363,489	271,967
Maslin....do	429,420	416,120	+ 13,300	21,205
Buckwheat....do	1,488,830	2,166,120	— 677,290	114,050
Rape....Metre centners	259,510	426,940	— 167,430	37,080
Poppy....do	23,580	25,540	— 1,930	4,088
Anise and fennel....do	4,290	4,040	+ 250	1,099
Flax....do	365,705	367,103	— 1,398	92,352
Tobacco....do	41,323	30,557	+ 10,766	2,657
Chrysanthemum....do	37,710	28,400	+ 9,310	1,780
Chicory....do	286,040	294,910	— 8,870	1,936
Potatoes....do	90,325,710	81,186,800	+ 9,138,910	1,099,538
Beets:				
Sugar....do	50,251,000	40,094,350	+10,156,650	225,446
Fodder....do	22,428,290	23,849,280	— 1,420,990	101,038
Cabbage....do	4,985,370	8,485,350	— 3,499,980	77,202
Pumpkins....do	1,720,460	1,569,960	+ 150,500	3,980
Hay:				
Clover....do	22,438,450	25,435,880	— 2,997,430	815,802
Meadow....do	75,301,960	76,447,180	— 1,145,220	2,971,119
Grass, fodder and clover....do	3,197,850	4,158,330	— 960,480	162,590
Hops....do	68,638	57,932	+ 10,706	†14,422
Rice....do	14,350	13,160	+ 1,190	598
Wine ....hectolitres‡	4,106,370	4,154,760	— 48,390	234,541
Figs....metre centners	49,530	51,570	— 2,040	.....
Olive oil....do	59,016	148,297	— 89,281	.....
Kernel fruit....do	1,480,800	6,533,210	.....	.....
Drupe....do	1,450,220	3,111,270	.....	.....
Nuts and almonds....do	96,647	102,130	.....	.....
Mulberry	.....	.....	.....	7,089
Chestnuts	.....	.....	.....	1,458

* 1 hectolitre=2.838 bushels.

† Field, 3,546 hectares; gardens, 10,876 hectares.

‡ 1 hectolitre=26.417 gallons.

From the above table it will be seen that nearly all the crops of 1889, and especially those of the more important cereals, show a falling off of from 15 to 25 per cent. as compared to the harvesting of 1888.

Table showing the various crops of 1889 in the different crown lands of Austria.

Products.	Moravia.	Silesia.	Galicia.		Bukowina.
			West.	East.	
Wheat.....hectolitres*	1,468,170	167,800	1,138,570	2,063,050	133,720
Rye.....do	3,405,720	600,780	1,266,030	3,331,470	276,540
Barley.....do	2,799,520	322,990	1,050,070	1,862,170	392,000
Oats.....do	3,697,940	818,750	1,750,390	3,792,560	416,390
Maize.....do	125,220	.....	.....	1,044,530	940,610
Millet.....do	105,670	.....	41,450	276,200	12,520
Beans, peas, and lentils.....do	299,800	28,180	180,790	899,960	42,230
Maslin.....do	.....	14,420	.....	.....	.....
Buckwheat.....do	29,080	8,120	34,840	675,260	58,650
Straw.....metre centners	12,312,400	1,785,550	6,036,100	17,160,000	2,593,500
Rape.....do	24,660	3,000	19,440	45,060	510
Poppy.....do	11,600	.....	.....	.....	.....
Anise and fennel.....do	2,270	.....	.....	.....	2,020
Flax:					
Seed.....do	29,290	1,480	.....	.....	3,090
Fiber.....do	75,130	8,090	26,040	38,580	1,590
Hemp:					
Seed.....do	.....	.....	.....	.....	28,700
Fiber.....do	7,020	.....	10,690	111,000	16,350
Tobacco.....do	.....	.....	33,393	1,400	.....
Potatoes.....do	12,471,700	3,434,700	10,467,580	25,893,700	2,004,790
Beets:					
Sugar.....do	13,598,430	818,640	508,200	.....	.....
Fodder.....do	3,105,650	309,700	3,139,960	1,651,660	121,250
Cabbage.....do	512,100	28,970	487,790	867,080	6,900
Pumpkins.....do	.....	.....	.....	.....	151,330
Hay:					
Clover.....do	1,972,940	1,124,000	1,966,300	1,009,380	121,120
Meadow.....do	3,364,100	654,200	2,447,050	5,195,970	1,211,100
Clover seed.....do	6,900	1,710	3,880	5,095	724
Grass, fodder and clover.....do	376,380	87,420	332,800	648,960	.....
Hops.....do	1,520	.....	1,103	4,935	.....
Wine:					
White.....hectolitres†	229,720	.....	.....	.....	.....
Red.....do	33,900	.....	.....	.....	.....
Total.....do	263,620	.....	.....	.....	.....
Vine grapes.....metre centners	.....	.....	.....	.....	1,680
Fruits:					
Kernel fruit.....do	83,350	2,460	5,820	564,610	64,730
Drupes.....do	81,030	1,700	23,600	497,340	30,040
Nuts (almonds).....do	.....	.....	.....	1,280	2,600
Total.....do	164,380	4,160	29,420	1,063,230	97,370

* 1 hectolitre=2⅞ bushels. † 1 hectolitre=26.417 gallons.

Table showing the various crops of 1889 in the different crown lands of Austria—Continued.

Products.	Lower Austria.	Upper Austria.	Salzburg.	Styria.	Carinthia.
Wheat.....hectolitres*...	1,292,880	857,560	115,240	887,270	225,660
Rye.....do.....	2,822,200	2,001,250	166,570	1,088,070	530,750
Barley.....do.....	859,180	901,820	22,200	224,110	180,560
Oats.....do.....	3,088,290	2,129,840	274,780	1,513,290	605,980
Maize.....do.....	209,290	.....	.....	976,500	190,680
Millet.....do.....	.....	.....	.....	135,050	37,200
Beans, peas, and lentils.....do.....	50,050	4,100	3,330	176,630	49,290
Maslin.....do.....	.....	341,140	.....	.....	12,320
Buckwheat.....do.....	29,160	1,350	.....	326,670	38,160
Straw.....metre centners...	9,549,420	6,260,550	466,000	5,361,340	2,640,680
Rape.....do.....	2,920	15,600	.....	5,150	.....
Poppy.....do.....	1,490	.....	.....	.....	.....
Flax:					
Seed.....do.....	.....	37,200	620	44,850	4,730
Fiber.....do.....	6,300	24,550	1,060	39,880	6,180
Hemp:					
Seed.....do.....	.....	4,100	.....	8,540	2,300
Fiber.....do.....	.....	2,325	142	8,860	3,430
Potatoes.....do.....	3,390,530	1,338,300	28,960	1,415,160	727,230
Beets:					
Sugar.....do.....	596,680	.....	.....	.....	.....
Fodder.....do.....	4,403,220	632,470	8,920	3,425,680	418,970
Cabbage.....do.....	226,990	319,940	98,590	761,100	83,420
Pumpkins.....do.....	.....	.....	.....	1,491,720	72,830
Hay:					
Clover.....do.....	1,552,480	2,760,900	138,790	1,780,340	650,500
Meadow.....do.....	5,434,090	9,797,200	1,876,140	17,498,130	2,084,320
Clover seed.....do.....	.....	3,900	220	12,980	2,930
Grass, fodder and clover.....do.....	176,400	71,750	.....	161,070	46,200
Hops.....do.....	.....	6,320	.....	6,500	60
Wine:					
White.....hectolitres†...	1,586,860	.....	.....	202,910	80
Red.....do.....	28,640	.....	.....	107,580	10
Total.....do.....	1,615,500	.....	.....	310,490	90
Vine grapes.....metre centners...	.....	.....	.....	.....	160
Fruits:					
Kernel fruit.....do.....	.....	163,900	60	363,500	20,980
Drupes.....do.....	.....	45,050	130	139,490	5,180
Nuts (almonds).....do.....	.....	.....	.....	68,800	1,060
Total.....do.....	.....	208,950	190	571,790	27,220

*1 hectolitre=2⅝ bushels. †1 hectolitre=26.417 gallons.

Table showing the various crops of 1889 in the different crown lands of Austria—Continued.

Products.	Carniola.	Tyrol.		Vorarlberg.	Bohemia.
		North.	South.		
Wheat.....hectolitres*...	208,780	92,420	138,850	9,960	4,162,700
Spelt.....do.....	.....	.....	.....	15,150	.....
Rye.....do.....	159,350	184,550	237,560	4,550	8,765,450
Barley.....do.....	173,560	113,400	61,500	8,350	6,757,170
Oats.....do.....	359,530	89,430	31,980	12,990	9,854,140
Maize.....do.....	288,400	105,960	333,500	41,570	.....
Millet.....do.....	180,870	.....	.....	.....	12,730
Beans, peas, and lentils.....do.....	22,890	20,440	9,050	2,180	594,600
Maslin.....do.....	.....	.....	.....	4,090	.....
Buckwheat.....do.....	170,970	7,800	37,650	.....	.....
Straw.....metre centners...	1,842,440	689,300	910,500	121,600	30,677,300
Rape.....do.....	.....	.....	.....	.....	142,900
Poppy.....do.....	.....	.....	.....	.....	10,490
Flax:					
Seed.....do.....	6,890	4,700	.....	.....	83,600
Fiber.....do.....	7,190	6,700	810	35	123,340
Hemp:					
Seed.....do.....	880	180	.....	.....	290
Fiber.....do.....	990	93	1,220	290	460
Tobacco.....do.....	5,130	.....	.....	.....	.....
Chicory.....do.....	.....	.....	.....	.....	286,040
Potatoes.....do.....	954,320	265,960	129,800	101,840	27,350,640
Beets:					
Sugar.....do.....	.....	.....	.....	.....	34,729,050
Fodder.....do.....	827,060	291,800	162,450	20,310	3,757,720
Cabbage.....do.....	202,070	41,050	76,350	7,410	1,163,510
Pumpkins.....do.....	.....	.....	.....	4,580	.....
Hay:					
Clover.....do.....	675,460	80,400	127,180	4,550	8,378,280
Meadow.....do.....	2,833,100	3,867,300	2,763,840	1,331,310	13,084,540
Clover seed.....do.....	2,320	.....	.....	.....	23,090
Grass, fodder and clover.....do.....	10,970	1,600	.....	.....	1,254,930
Hops.....do.....	.....	.....	.....	.....	48,200
Wine:					
White.....hectolitres†...	68,020	1,310	29,790	2,020	5,240
Red.....do.....	66,550	520	137,860	220	3,150
Total.....do.....	134,570	1,830	167,650	2,240	8,390
Fruits:					
Kernel fruit.....metre centners...	7,810	1,709	19,260	1,880	163,780
Drupes.....do.....	15,650	450	9,150	2,530	563,570
Nuts (almonds).....do.....	9,130	80	2,810	.....	.....
Total.....do.....	32,590	2,230	31,220	4,410	727,350
Olive oil.....do.....	.....	.....	1,180	.....	.....

*1 hectolitre=2⅞ bushels. †1 hectolitre=26.417 gallons.

Table showing the various crops of 1889 in the different crown lands of Austria—Continued.

Products.	Göritz and Gradiska.	Trieste.	Istria.	Dalmatia.	Total.
Wheat.....hectolitres*	132,140	1,230	102,030	326,800	13,524,830
Spelt.....do	5,080	40	47,060	29,800	97,130
Rye.....do	13,930	1,180	21,330	67,520	24,944,800
Barley.....do	36,170	1,140	63,770	306,870	16,136,550
Oats.....do	17,080	.....	40,450	30,080	28,523,880
Maize.....do	313,550	3,620	321,490	911,130	5,806,050
Millet.....do	970	.....	6,200	96,420	905,280
Sorghum.....do	3,800	.....	20,690	15,040	39,530
Beans, peas, and lentils.....do	13,820	170	15,635	22,270	2,435,415
Maslin.....do	.....	.....	.....	57,450	429,420
Buckwheat.....do	63,650	1,130	6,340	.....	1,488,830
Straw.....metre centners	489,600	6,240	702,100	2,090,330	101,694,950
Rape.....do	260	.....	.....	.....	259,510
Poppy.....do	.....	.....	.....	.....	83,580
Anise and fennel.....do	.....	.....	.....	.....	4,890
Flax fiber.....do	380	.....	.....	.....	365,707
Hemp fiber.....do	710	.....	.....	.....	163,580
Tobacco.....do	.....	.....	1,400	.....	41,323
Chrysanthemum.....do	.....	.....	37,710	.....	37,710
Chicory.....do	.....	.....	.....	.....	286,040
Potatoes.....do	131,960	900	64,830	152,900	90,325,710
Beets:					
Sugar.....do	.....	.....	.....	.....	50,251,000
Fodder.....do	131,540	1,250	12,480	6,200	22,428,290
Cabbage.....do	7,180	.....	21,500	73,420	4,985,370
Pumpkins.....do	.....	.....	.....	.....	1,720,460
Hay:					
Clover.....do	79,410	440	6,230	9,810	22,438,450
Meadow.....do	788,980	15,200	726,720	328,670	75,301,960
Clover seed.....do	150	.....	70	.....	.....
Grass, fodder and clover.....do	24,050	600	4,720	.....	3,197,850
Hops.....do	.....	.....	.....	.....	68,638
Rice.....do	14,350	.....	.....	.....	14,350
Wine:					
White.....hectolitres†	50,380	9,000	73,500	72,720	2,331,550
Red.....do	71,220	13,900	233,350	1,077,920	1,774,820
Total.....do	121,600	22,900	306,850	1,150,640	4,106,370
Grapes.....metre centners	.....	.....	820	.....	.....
Figs.....do	.....	600	16,900	32,030	49,530
Chestnuts.....do	5,100	21	1,300	280	.....
Fruits:					
Kernel fruit.....do	14,130	.....	1,000	1,830	.....
Drupes.....do	20,280	.....	1,440	13,590	.....
Nuts (almonds).....do	1,810	27	720	6,330	.....
Total.....do	36,400	27	3,160	21,750	.....
Olive oil.....do	55	41	4,520	53,280	59,016
Mulberry leaves.....do	53,680	210	49,070	35,210	.....

*1 hectolitre=2⅞ bushels. †1 hectolitre=26.417 gallons.

Table showing the range of weight of 1 hectolitre of the chief grain crops in the several crown lands of Austria in 1889.

Crown land.	Wheat.	Rye.	Barley.	Oats.	Maize.
	Kilos.	*Kilos.*	*Kilos.*	*Kilos.*	*Kilos.*
Lower Austria	74 to 79	63 to 73	60 to 64	40 to 44	71 to 80
Upper Austria	73 to 76	67 to 70	57 to 60	43 to 46	.....
Salzburg	60 to 79	56 to 70	46 to 56	38 to 41	.....
Styria	72 to 75	67 to 70	57 to 61	43 to 45	74 to 75
Carinthia	73 to 76	69 to 72	60 to 64	42 to 46	68 to 72
Vorarlberg	82	75	66	54	76
Tyrol:					
North	68 to 74	67 to 68	60 to 62	37 to 44	64 to 66
South	73 to 76	70 to 72	56 to 61	37 to 41	64 to 74
Carniola	69 to 75	61 to 69	58 to 65	42 to 43	67 to 71
Görtz and Gradiska	73 to 80	68 to 73	60 to 64	40 to 49	63 to 73
Trieste	76	68	62	.....	75
Istria	61 to 76	62 to 71	51 to 61	37 to 43	53 to 72
Dalmatia	74 to 75	72 to 73	62 to 64	38 to 39	70 to 74
Bohemia	72 to 78	69 to 73	63 to 66	43 to 48	66 to 67
Moravia	71 to 78	71 to 76	60 to 66	41 to 46	72 to 77
Silesia	75	69	60	45	.....
Galicia:					
West	74 to 76	71 to 73	61 to 65	44 to 48	.....
East	68 to 76	62 to 71	57 to 66	39 to 45	66 to 77
Bukowina	70 to 73	66 to 70	62 to 63	40 to 45	70 to 75

AUSTRIAN BARLEY AND MALT.

Barley.—Barley represents one of the most important kinds of grain of the Monarchy, and it is not marketed on future terms. The finest barley is grown in Moravia, and particularly that of the "Hanna plain," which is valued higher than barley produced near the River Saale, which latter is considered the very best kind of German barley.

For 1889 Moravia yielded only a two-thirds crop. After harvesting, malting barley was noted at 9 florins per 100 kilogrammes; but, in consequence of the failure of the barley crop in Bohemia and of that in the north of Hungary, where brewing barley of an inferior quality is raised, the prices of last week reached 10.50 florins and higher, and superior qualities were sold for 11.50 florins and more. The rise in prices was chiefly caused by great demand from Germany; for, in spite of all previous and persistently continued misrepresentation of the true state, it still became evident that the barley crop of Germany would prove a total failure.

The enormous advance in prices for Moravian barley of prime quality was followed by a rise of prices for inferior qualities grown in certain parts of Austria-Hungary—upper Hungary (Kaschau), Galicia, Slovakia (north-western Hungary)—which, being scarcely fit for exporting, at other times are scarcely taken note of.

The greater part of Austrian barley is exported in the form of malt.

Malt.—The independent trade of making malt, that is, the making of malt for sale in places not connected with any brewery, has existed in Austria for 30 years and was first commenced in Moravia, which is still the chief

seat of malt-making. Notwithstanding the tariff politics of the agrarians during the last decade, and in spite of German competition, called forth and strengthened by those tariff politics, the exporting of Austrian malt, owing to the growing consumption of beer in Europe, has been on the increase from year to year. The very best reputation is attached to Hanna malt, 100 kilogrammes of which will bring from 3 to 5 florins more than any other malt.

There are somewhat over 100 independent malt factories (not including those connected with breweries) in Austria-Hungary, 60 of which are in Moravia, 10 in Silesia, and the rest distributed over Bohemia, Lower Austria, and Hungary.

The principal export of malt is directed to Germany, the annual export to that country amounting to 10,000 railway cars of 10 tons each. About 2,500 railway cars of malt are exported to Switzerland, and smaller quantities are sent to Belgium, Sweden, Norway, Denmark, Holland, Italy, etc. Hamburg exporters are said to have been shipping small lots of malt to the United States this year.

AUSTRIAN HOPS.

The fact of beer having been introduced into parts where even the name of "beer" had been unknown before and its constantly increasing consumption all over the face of the earth can not be looked upon but with satisfaction, if, as it is alleged, the use of it is destined in a great measure to supplant that of strong alcoholic drink with the laboring classes in general. Without dwelling on the pernicious effects resulting from the use of strong drink, the moderate use of beer, it is held, nourishes and strengthens the body without besotting the mind. As a consequence, beer has become a great staple article in the marts of the world; and the several industries connected with the manufacture of it, which have assumed immense proportions, are growing into greater significance. Its growing consumption has led to a greater supervision on the part of the Government as to the ingredients needed for its manufacture. The chief ingredients of beer are barley, in the form of malt, and hops; both of these are cultivated and largely exported to Germany, England, and the United States.

The chief districts for growing hops in Austria are the countries about Saaz, Auscha, and Dauba. There are about 11,500 hectares under cultivation, yielding annually 120,000 to 130,000 metre centners of hops.

The hops of Saaz are claimed to be the best in the world. There are about 2,500 *Striche* (rows), with 75,000 *Schocke* (4,500,000) of *Stangen* (poles), which is equal to an area of about 7,500 to 8,000 hectares for the cultivation of hops near Saaz. The average product of that area is considered a good one if 10 *Schocke* (600 *Stangen*) yield 50 metre centners of hops; hence the hop crop of 1889, being estimated at from 75,000 to 80,000 metre centners, must be deemed one of the best ever produced in the district. Regarding the prime cost, it is generally considered that, not taking into account any failure of crop, the average expenses for the production of 1 metre centner of

Saaz hops obtained by a good middling crop, that is to say, with a total produce of 50,000 to 60,000 metre centners, will amount to from 60 to 70 florins.

The crop of 1889, as already mentioned, yielded from 75,000 to 80,000 metre centners. The quality, in spite of the large quantity of hops planted, is one of the very best obtained for many years—of finest growth, light color, shining, captivating the eye, and perfectly sound. It is, indeed, without any blemish and fully justifies the appellation of "best hops."

The firstlings of 1889 were placed at the price of 90 to 100 florins per 50 kilogrammes, but as soon as it was ascertained that an unusual abundance of hops had been secured those prices could not be maintained, and business became very stagnant. Producers from all sides were pressing for sales, transactions grew languid, and prices declined from 45 to 55 florins. At prices thus reduced both traders and brewers became willing buyers, and by the middle of September more than half of the hop product of the Saaz district had changed hands. In consequence of the brisk transactions, the other half of the crop met with ready sales, and during the months of September and October Saaz hops commanded again from 70 to 80 florins per 100 kilogrammes. Up to this day that price has not only been fully maintained, but seems rather on the advance. Sellers of good hops are holding back at the price of 80 florins per 50 kilogrammes, probably induced by the consideration that the stock in the hands of the producers will scarcely amount to 500 metre centners and that the wants have not yet been fully supplied. There is scarcely any probability that the price for this sort of hops will give way.

The following table exhibits the average price for 50 kilogrammes of Saaz hops during the harvests of the last 15 years:

Year.	Opening.	Middle.	Close.*
	Florins.	*Florins.*	*Florins.*
1875	110	60	60
1876	300	380	320
1877	110	100	90
1878	115	130	70
1879	150	140	100
1880	100	90	100
1881	130	120	80
1882	160	280	260
1883	160	150	130
1884	110	125	120
1885	80	70	60
1886	105	100	85
1887	110	145	120
1888	150	130	120
1889	85	60	75 to 80

*The last day of December of each year is taken as the close of the harvest.

The district of Rothlande comprises the hop-growing countries about Auscha, Leitmeritz, Raudnitz, and Wegstadt. The product is well liked and known by the name of "Auschaer Rothhopfen" (Auscha red hops). There

are about 2,000 hectares cultivated, and the yield for 1889 was about 25,000 metre centners, or about 10 metre centners per hectare. With a good crop the cost for producing 50 kilogrammes of hops will not exceed 30 to 32 florins.

During the last harvest prices for hops varied from 35 to 55 florins, but, the stock on hand having become greatly reduced by the lively sales of September, October, and November, producers now ask and receive from 50 to 60 florins for 50 kilogrammes. However, it is but natural that these small stocks have much to be wished for in regard to quality. The average price for Auscha red hops for the last 10 years may be taken to be about 65 florins per 50 kilogrammes. The annexed table shows the average price for 50 kilogrammes of Auscha red hops at the opening, middle, and close of each harvest for the last 11 years:

Year.	Opening.	Middle.	Close.
	Florins.	*Florins.*	*Florins.*
1879	85	65	30
1880	45	35	60
1881	80	50	55
1882	100	280	150
1883	85	110	90
1884	80	60	35
1885	35	30	15
1886	60	40	20
1887	40	20	30
1888	90	50	30
1889	60	35	50

The Grünlande of Dauba comprises about 1,485 hectares of fields, producing "Grünhopfen" (green hops) located in the following districts: Dauba, 650 hectares; Wegstadt, 155 hectares; Melnik, 214 hectares; Leipa, about 85 hectares. In 1889 the total crop of the Grünlande was 20,000 metre centners, or about 13 metre centners per hectare. The prime cost for a good crop of green hops varies from 24 to 26 florins for 50 kilogrammes.

The harvest of 1889 started with the price of 35 florins per 50 kilogrammes of green hops; that price, however, could be maintained but a very short time, as in the first half of December it had declined to 18 to 22 florins. At these low prices large transactions for export took place, prices remaining nearly unchanged until the middle of October, when they showed signs of rising again, and enormous quantites of green hops were shipped to England at 20 to 30 florins per 50 kilogrammes. The present stock of green hops at the disposal of producers is very small. The average price of green hops for the last 10 years may be computed at 35 florins per 50 kilogrammes.

AUSTRIAN OILSEEDS.

Oilseeds are mostly cultivated in Hungary, although there is some rape also grown in Austria. This crop has proved a failure, hence the price of 12 florins before harvesting has reached at present the figure of 19.50 florins.

HUNGARIAN AGRICULTURE.

The total acreage of Hungary in 1889, as reported by the department of agriculture, was 6,396,029 hectares, which were cultivated for the several products according to the following table:

Table giving the acreage, yield, and value of the chief grain crops in 1889 and the average yield per toch.

Products.	Area.	Yield.	Value.	Average yield per toch.
	Tochs.	*Metre cent.*	*Florins.*	*Metre cent.*
Wheat	5,058,765	25,235,886	197,397,468	4.98
Rye	2,176,948	10,692,703	67,810,907	4.91
Barley	1,749,197	7,695,855	49,681,655	4.40
Oats	1,777,373	6,718,835	37,179,759	3.78
Rape	99,731	293,761	4,576,362	2.95
Millet	80,816	417,226	2,181,064	5.16
Maize	3,367,403	26,593,653	115,021,040	7.90
Peas, beans, and lentils	79,150	403,222	2,936,996	5.09
Vetch seed	131,716	702,742	4,106,589	5.33
Flax:				
Seed	23,969	81,711	799,250	3.41
Fiber		85,834	3,501,080	3.58
Hemp:				
Seed	128,866	398,965	3,055,959	3.09
Fiber		489,027	16,972,028	3.79
Tobacco	79,248	567,240	11,033,252	7.15
Beets:				
Sugar	95,048	11,091,536	9,489,454	116.69
Fodder	197,870	29,261,657	17,708,365	147.88
Potatoes	763,533	28,846,627	36,766,739	37.78
Lucern clover (sainfoin)	466,817	9,889,477	23,292,634	21.18
Vetch mixture (millet, grain, etc.)	421,351	6,832,511	14,930,844	16.21
Hay	4,594,025	54,183,193	116,907,530	11.80
Total	21,291,817	.....	734,648,975	.....

NOTE.—1 toch=1½ acres.

AUSTRIAN WINE AND AMERICAN VINES.

Fruit has proved a total failure throughout the whole of the realm, but the vintage, both of Austria and Hungary, has turned out above "middling good," not only in quantity, but also in quality. To counteract the spread of the *Peronospora* Parliament has granted to wine-growers the importation of blue vitriol free of duty, and the Hungarian minister of agriculture contemplates utilizing the large sandy plains of the country for the planting of vineyards. It is proposed to plant about 40,000 acres with vines imported from the United States, as these have hitherto defied the phylloxera. Not only are the wine-growers of Austria dependent on the American vine, but the wine-growers of Europe are equally dependent thereon.

It is not many years since people in general looked up inquiringly and shrugged their shoulders distrustfully when they first heard of the wines of California. To-day we may point out to skeptical Europe that, as the immense advance of mankind on the way to independence and to happiness is chiefly due to the peace-promoting inventions of our young nation, and as

our grain and beef and pork supply the densely crowded and needy populations of Europe with cheap and wholesome nourishment, and as our cotton enriches their wealthy and gives employment to their laborers, so our vine, even at present, is saving their wine-growers from total extinction.

It is a well-known fact that in Austria-Hungary, in Germany, France, etc., very large areas of valuable land in a high state of cultivation have for ages been converted into vineyards, and that thousands upon thousands of wine-growers, devoting all their time and studies to the cultivation of the vine, derive their whole support and their only means of subsistence from the results of the vintage.

All those studies and all that labor of many generations have been set at naught by the appearance and ravages of a little mite, the phylloxera; and the entire destruction of the vineyards, which the efforts of the sages of Europe, with all their deep science, have not been able to avert, would only become a mere question of time had not the American vine come to the assistance of the hard-pressed wine-growers of Europe.

In comment thereon, it will be interesting to read the following extract from an article published in the Austrian newspaper Neue Freie Presse of September 20, 1890, and headed "The Exhibition of American and Improved Vines at the Agricultural Exhibition at Vienna."

The continued augmentation and uninterrupted spreading out of the noxious insect phylloxera is affecting the domestic culture of the vine in a manner more and more threatening, hence the greatest interest is turned to any measure or experiment which might procure the means of protection against the terrible devastation caused to vineyards by that mischievous insect. The American vine offers us the means of still pursuing our cultivating of the vine in spite of the phylloxera, and, although many a trial and several experiments will yet have to be made in the choice of the sorts best adapted for such purpose, still the present results already attained by the trials made in Austria have proved very encouraging and hold out the best hopes of securing our vineyards against the ravages of the phylloxera, aside from taking into consideration the most brilliant success which the French point out in regard to the introduction of the American vine.

At the recent agricultural exhibition there were exhibited several sorts of American vines bearing grapes directly and various kinds of improved vines that were cultivated in lower Austria by some associations and by private persons. Although the collection was far from being complete, many of the wine-growers and technical schools not being represented in it, still the exhibition was very interesting and proved highly instructive. It shows us the American vine to be of a wonderful power of vegetation, and that in 1 year it is able to produce shoots of more than 5 metres (15 feet) in length; it demonstrates the surprisingly rich vegetation of the American vine successfully improved.

Although these facts are not unknown to some of the professional men, yet they have not come to the knowledge of a great number of wine-growers, and to these, therefore, the exhibition offered a rare chance of seeing and learning.

Worthy of notice, in the first place, is the collection of the Landes Rebschule (school and nursery for vines), in Korneuburg, displaying improved

vines, of which more than 90 per cent. have proved a perfect success, as also American vines (Triumph and Othello) bearing directly and heavily laden with grapes. Improved and directly bearing vines from the vineyards of the convent at Melk, besides a magnificent assortment of grapes obtained there, partly from American vines and partly from improved vines, are likewise on exhibition. The Winzerschule (vintagers' school) in Krems is represented by highly and successfully improved vines. Coping with these for success are the several associations of wine-growers in Grinzing, Gumpoldskirchen, Mödling, Tribuswinkel, etc., displaying improved vines, some of which are covered with grapes. The convent of Zwettel has also joined in the contest, besides a good many other associations and wine-growers, most of them with a highly gratifying result.

The exhibition is a welcome manifestation of the cheering proof that the wine-growers are zealously engaged in the resuscitation of, and making productive again, their vineyards, which have been laid waste to so great an extent by the devastation caused by the phylloxera, and that they are willing to accept instruction. It is wished that such information be not confined to a few districts, and that endeavors to promote the interest of wine-growers by proper information will in other parts meet with the same assistance from the proper authorities as they do with those of Lower Austria.

PRIMOGENITURE FARMERS.

The retrogressive tendency in all the branches of Austrian legislation has been the means of creating an agrarian law, which was combated by the enlightened men of all parties, but which, however, was "whipped through" by a peculiar combination of factions—the votes of the Slavs, together with those of the ultraconservative and ultraorthodox factions. The new law is entitled "Law relating to the introduction of special regulations for the portioning out of hereditary shares of agricultural estates of medium size (small farms)." By this law it is ordained that all such farms as are not larger in extent than the "minimum extent which is to be determined upon by the *Landesgesetzgebung* (provincial or county legislature) must not be divided among the heirs, but transferred in their entirety to one heir. This law grants special advantages to the heir apparent, such as a præcipium appraisement at very low figures and a long term for the payment of the legitimate portions of any coheirs, etc.

This law was principally objected to on the ground that the execution of it would be the means of creating a proletariate amongst the peasantry, which evil could scarcely be counterbalanced by the fact that at least one of the heirs—the heir apparent—would derive a sufficiency of sustenance from the farm, which, if divided, would undergo dismemberment and prove insufficient to satisfy the wants of either of the heirs. This reactionary law has, however, received a damper by the paragraph which places the determining of the "minimum size of a farm" in the hands of the different county legislatures, some of which are already preparing dilatory measures which will nullify the law.

One advantage offered by this law is its greatly facilitating the collecting of taxes for husbandry, the gathering of dues being much safer and a great deal less expensive to the State when exacted from the proprietor of one small farm than from the owners of several small plots of land; nay, a compulsory collection of dues from the latter will invariably fail to cover the expenses incurred for collecting.

AUSTRO-HUNGARIAN CROPS OF 1890.

No official reports have as yet been published of the crops of 1890 in Austria-Hungary, nor probably will be before August, 1891. As soon as they can be obtained I shall have the honor to submit them to the Department.

The following figures on the estimated cereal crops were reported at the eighteenth international corn market held at Vienna on August 25 and 26, 1890:

Table showing the acreage and estimated yield of the chief grain crops of Austria-Hungary in 1890.

Products.	Acreage.			Yield.		
	Austria.	Hungary.	Total.	Austria.	Hungary.	Total.
	Hectares.	*Hectares.*	*Hectares.*	*Metre cent.*	*Metre cent.*	*Metre cent.*
Wheat	1,174,024	3,032,632	4,206,656	17,000,000	47,000,000	64,000,000
Rye	1,973,292	1,185,182	3,158,474	30,000,000	18,000,000	48,000,000
Barley	1,109,824	1,048,842	2,158,666	19,000,000	16,700,000	35,700,000
Oats	1,880,485	1,129,373	3,009,858	31,000,000	14,000,000	45,000,000

If the average return for 1 toch be estimated for wheat at 6½ metre centners in Austria and 5 metre centners in Hungary, rye at 6 metre centners in Austria and 5 metre centners in Hungary, barley at 6½ metre centners in Austria and 5 metre centners in Hungary, oats at 6 metre centners in Austria and 6½ metre centners in Hungary, the cereal crops of 1890 in Austria-Hungary would exceed that of a full middling crop, leaving the surplus as follows: Wheat, 10,000,000 metre centners; rye, 7,000,000 metre centners; barley, 5,000,000 metre centners; oats, 5,000,000 metre centners.

A full middling crop (not the average return of former years), taken at 100 units, shows the average return of the harvest of 1890, expressed in percentage and in round figures, to be as follows:

Country.	Wheat.	Rye.	Barley.	Oats.
	Per cent.	*Per cent.*	*Per cent.*	*Per cent.*
Austria	100	107	111	119
Hungary	127	138	124	98

AUSTRIAN CROPS OF 1890.

The area of 1,174,024 hectares under cereal cultivation in Austria in 1890 yielded the following returns:

Table showing the yield in 1890 of the four principal grain crops in the several crown lands of Austria.

Crown lands.	Wheat.	Rye.	Barley.	Oats.
	Metre cent.	*Metre cent.*	*Metre cent.*	*Metre cent.*
Lower Austria	1,393,566	2,953,926	1,400,818	3,184,418
Upper Austria	834,986	1,148,840	646,842	1,205,373
Salzburg	109,714	142,206	18,349	141,432
Styria	962,989	1,110,439	247,724	1,351,189
Carinthia	230,013	567,442	158,102	323,577
Carniola	324,164	232,212	214,342	264,480
Tyrol:				
North	1,137,916	204,316	77,820	76,771
South	156,433	220,480	44,672	19,683
Vorarlberg	17,496	13,883	7,686	6,050
Bohemia	4,343,155	9,524,401	6,717,122	7,600,455
Moravia	1,558,427	3,873,745	3,513,546	3,906,018
Silesia	180,691	685,976	437,998	939,933
Galicia:				
West	1,463,800	3,072,160	1,791,252	4,745,292
East	3,303,706	5,126,158	3,856,582	7,031,343
Bukowina	340,550	565,774	562,890	624,096
Göritz and Gradiska	132,828	9,899	21,946	17,777
Trieste	1,200	1,233	642	.....
Istria	145,753	24,559	74,378	42,178
Dalmatia	335,940	62,655	267,120	47,510
Total	16,973,321	30,040,104	19,663,831	31,527,575

The quality of grain, judged by its weight, is given for each crown land by the following table:

Table showing the weight per hectolitre (2.838 bushels) of the grain crop of each crown land for 1890.

Crown land.	Wheat.	Rye.	Barley.	Oats.
	Kilos.	*Kilos.*	*Kilos.*	*Kilos.*
Lower Austria	72 to 84	67 to 76	56 to 70	40 to 52
Upper Austria	73 to 79	68 to 73	62 to 65	38 to 48
Salzburg	76 to 79	65 to 70	60 to 65	.....
Styria	76 to 90	69 to 72	62 to 68	45 to 53
Carinthia	75 to 82	72 to 76	64 to 70	43 to 48
Carniola,	75 to 76	70 to 73	62 to 65	46 to 52
Tyrol:				
North	76 to 77	69 to 72	63 to 65	45 to 49
South	76 to 80	70 to 74	64 to 68	46 to 48
Bohemia	70 to 84	60 to 78	60 to 72	42 to 52
Moravia	70 to 82	68 to 78	62 to 72	42 to 52
Silesia	75 to 80	70 to 74	64 to 71	45 to 54
Galicia:				
West	73 to 77	69 to 72	60 to 68	46 to 50
East	70 to 79	67 to 76	62 to 65	.....
Bukowina	70 to 80	69 to 75	60 to 65	40 to 50
Trieste	.....	.....	60 to 65	.....
Göritz and Gradiska	77 to 80	60 to 73	60 to 65	40 to 48

THE WORLD'S WHEAT HARVEST.

The world's wheat harvest, as estimated and reported at the eighteenth international corn market, held at Vienna, Austria, on August 25 and 26, 1890, from the publications of the several Governments, and from other reliable sources, shows the following results:

Table showing the wheat crop for 1888, 1889, and 1890 of the chief grain-growing countries of Europe.

Countries.	1888.	1889.	1890.
	Hectolitres.	*Hectolitres.*	*Hectolitres.*
Austria	18,270,000	13,572,000	17,400,000
Hungary	49,685,700	33,570,400	57,202,500
Belgium	6,090,000	6,960,000	6,960,000
Bulgaria	13,050,000	12,760,000	13,050,000
Denmark	1,392,000	1,812,500	2,030,000
France	99,812,200	113,825,000	116,000,000
Germany	33,358,700	30,812,500	33,350,000
Greece	3,625,000	3,987,500	4,350,000
Holland	1,740,000	2,175,000	2,175,000
Italy	36,627,000	36,482,000	44,587,500
Norway	145,000	145,000	145,000
Portugal	2,465,000	2,900,000	2,900,000
Roumania	20,320,000	15,767,300	21,750,000
Russia	108,750,000	66,120,000	75,690,000
Servia	3,117,500	2,175,000	3,625,000
Spain	23,838,000	26,680,000	24,650,000
Sweden	1,339,800	1,342,700	1,305,000
Switzerland	725,000	870,000	870,000
Turkey	14,500,000	13,050,000	13,050,000
Great Britain	27,201,900	27,506,500	27,550,000
Total	465,832,800	412,513,400	468,640,000

Table showing the wheat crop for 1888, 1889, and 1890 of the chief grain-growing countries not belonging to Europe.

Countries.	1888.	1889.	1890.
	Hectolitres.	*Hectolitres.*	*Hectolitres.*
Algiers	7,960,500	5,713,000	7,975,000
Argentine Republic	4,350,000	7,975,000	7,975,000
Australia	9,497,500	15,297,500	14,500,000
Asia Minor	13,050,000	13,050,000	13,050,000
Canada	11,600,000	10,875,000	13,775,000
Cape colonies	1,380,400	1,325,000	1,305,000
Chile	4,350,000	5,147,500	6,525,000
Egypt	2,900,000	2,537,500	2,990,000
India	94,383,400	85,964,700	82,650,000
Persia	8,120,000	7,975,000	7,975,000
Syria	5,075,000	4,350,000	4,350,000
United States	150,750,500	177,828,000	145,000,000
Total	313,417,300	338,038,200	307,980,000

This makes up the estimated total of the world's wheat crop for 1890 as follows: Europe, 468,640,000 hectolitres; United States, 145,000,000

hectolitres; other countries, 162,980,000 hectolitres; total, 776,620,000 hectolitres, against 750,000,000 hectolitres in 1889 and 779,000,000 hectolitres in 1888. Thus the world's yield of wheat for 1890 is about 56,000,000 hectolitres greater than that of 1889.

The following prices in francs (gold) were paid at the following places in December, 1889 and 1890, for 100 kilogrammes of domestic wheat or equally good foreign wheat, duty paid:

Market.	1889.	1890.
	Francs.	*Francs.*
London	18.00	19.00
Paris	22.75	26.50
Berlin	23.75	23.75
Antwerp	17.75	19.00
Amsterdam	17.00	18.50
New York	16.50	19.50
Zurich	23.25	22.75
Odessa	14.50	16.00
Brahilov	13.50	15.50
Vienna	18.25	18.50

Thus it will be found that nearly all the principal grain markets show a rise in the price of wheat, which, however moderate, had not been taken into calculation by, and was quite unexpected to, the grain trade in general, which, in view of the harvest returns, had been looking for a reduction of prices by the end of August. As a natural consequence that disappointment was accompanied by very great losses.

The principal cause for the disappointment may be ascribed to the reason that, in judging of the statistical situation of the cereals, there had not been taken into consideration the great influence which the enormous stores of the crop of 1887 would bear on the prices for the harvest of 1888–'89 and 1889–'90.

In 1887 the wheat crop of Europe alone yielded 501,000,000 hectolitres; that of Europe and of the other countries together, 818,000,000 hectoliters; of which enormous quantity, according to the consumption of wheat in the world as calculated by English statisticians, there remained at the beginning of the harvest of 1888–'89 a surplus quantity of 40,000,000 to 50,000,000 hectolitres. The pressure of that surplus quantity on the market, although gradually decreasing, would not admit of a rising tendency of prices, and it was not until the end of the harvest of 1889–'90, and when the surplus quantity had been for the greater part disposed of, that the situation of the market began to assume a normal condition; and, as all fresh arrivals were readily taken up—which in the beginning proved even insufficient to supply the demand—the stability of the market and steady prices were natural consequences, and so much the more as the potato crop, which is of such vital interest to many countries, failed to answer the expectations, as in eastern and central Europe.

WHEAT CONSUMPTION IN EUROPE.

The consumption of wheat, according to the statistics of professional men, is supposed to be, per head of the population (men, women, and children), as follows:

Country.	Quantity.	Country.	Quantity.
	Hectolitres.		*Hectolitres.*
France	2.7	Denmark	0.52
Great Britain	2.152	Sweden and Norway	0.41
Belgium	2.32	Russia	0.65
Holland	2.447	Asia Minor	0.555
Spain	1.94	Syria	0.565
Portugal	1.69	Persia	0.5
Italy	1.597	India (English)	0.51
Greece	1.563	Australia	2.42
Turkey	1.182	United States	1.55
Algiers	1.28	Canada	1.446
Egypt	0.875	Mexico	1.085
Germany	0.928	Antilles	1.02
Switzerland	1.673	Central America	1.01
Austria-Hungary	1.45	Chile and Peru	1.55
Roumania	1.52	Argentine Republic	1.625
Servia	1.15		

If these figures be taken as the base for a calculation of the consumption of wheat, taking into account the respective populations of the different countries for each year and the necessary supply for seed and industrial purposes, the crops of wheat since 1887 and its consumption were as follows:

Year.	Yield.	Consumption.	Excess or deficit.
	Hectolitres.	*Hectolitres.*	*Hectolitres.*
1887-'88	818,142,200	772,850,000	+45,292,200
1888-'89	779,250,300	777,925,000	+ 1,325,300
1889-'90	750,556,960	784,450,000	—33,595,100
1890-'91	776,620,000	789,525,000	—12,905,000

AUSTRO-HUNGARIAN IMPORTS AND EXPORTS OF CATTLE.

In 1889 there were exported from Austria-Hungary: Oxen and bulls, 63,439; cows, 41,122; heifers, 18,390; calves, 10,812. In the first 9 months of 1890 there were exported: Oxen and bulls, 56,722; cows, 33,349; heifers, 15,223; calves, 8,526.

Table showing the imports and exports of cattle from 1886 to 1889.

Year.	Imports.	Exports.	Excess of exports.
	Number.	*Number.*	*Number.*
1886	68,139	128,664	60,525
1887	63,279	101,322	38,043
1888	49,624	94,978	45,354
1889	49,462	133,763	84,301

The average import and export of cattle from 1831 to 1889 is shown by the following table:

Period.	Annual average.		Excess of—	
	Imports.	Exports.	Imports.	Exports.
	Number.	*Number.*	*Number.*	*Number.*
1831–'35	145,667	94,291	59,376	.....
1836–'40	169,634	93,423	76,211	.....
1841–'45	169,222	124,155	45,067	.....
1846–'50	125,513	90,638	34,875	.....
1851–'55	148,876	93,070	56,806	.....
1856–'60	130,556	99,670	30,886	.....
1861–'65	108,420	138,058	.....	29,638
1866–'70	131,685	139,305	.....	7,620
1871–'75	179,589	145,986	33,603	.....
1876–'80	111,509	170,920	.....	59,411
1881–'85	66,325	114,805	.....	48,480
1886–'89	57,626	114,682	.....	57,056

The decrease in the import of cattle is chiefly attributable to the prohibition of the entrance of cattle from Roumania, which caused a reduction in the import of fully 52 per cent., whilst the export of cattle from Austria-Hungary does not seem to be affected thereby.

GENERAL EXPORTS.

The most important articles of export are coal, wood, grain, vegetables, and minerals, which together form 88 per cent. of the whole export, as may be seen by the following table:

Table showing the Austro-Hungarian exports from 1879 to October 31, 1890, inclusive.

Year.	Coal.	Wood.	Grain and vegetables.	Minerals.	Other wares.	Total.
	Metre cent.	*Metre cent.*	*Metre cent.*	*Metre cent.*	*Metre cent.*	*Metre cent.*
1879	32,800,000	17,200,000	12,300,000	2,600,000	12,000,000	76,900,000
1880	37,200,000	17,500,000	9,200,000	4,800,000	12,500,000	81,200,000
1881	36,600,000	19,200,000	10,000,000	6,700,000	12,400,000	84,900,000
1882	34,900,000	20,100,000	13,400,000	8,000,000	12,200,000	88,600,000
1883	40,700,000	21,100,000	9,900,000	8,300,000	13,200,000	93,200,000
Total	182,200,000	95,100,000	54,800,000	30,400,000	62,300,000	424,800,000
1884	41,200,000	22,300,000	8,300,000	9,400,000	13,400,000	94,600,000
1885	41,200,000	22,300,000	9,500,000	9,200,000	13,100,000	95,300,000
1886	45,000,000	19,200,000	9,200,000	8,600,000	14,100,000	96,100,000
1887	47,500,000	21,000,000	10,700,000	7,300,000	13,000,000	99,500,000
1888	61,200,000	20,900,000	13,400,000	6,600,000	15,200,000	117,300,000
Total	236,100,000	105,700,000	51,100,000	41,100,000	68,800,000	502,800,000
Average:						
1879–'83	36,400,000	19,000,000	11,000,000	6,100,000	12,500,000	85,000,000
1884–'88	47,200,000	21,100,000	10,200,000	8,200,000	13,800,000	100,500,000
1889	59,600,000	23,000,000	7,800,000	7,400,000	.....	.....
First 10 months of 1890	54,800,000	12,900,000	8,300,000	8,900,000	17,600,000	102,500,000

NOTE.—1 metre centner=221½ pounds.

Spinning and weaving form a very important link in the chain of foreign trade, as may be seen from the following table:

Table showing the textile exports from 1879 to October 31, 1890, inclusive.

Year.	Cotton yarn.	Cotton. goods.	Linen yarn.	Linen goods.	Woolen yarn.
	Met. cent.	*Met. cent.*	*Met. cent.*	*Met. cent.*	*Met. cent.*
1879	4,619	26,555	105,001	52,336	14,965
1880	5,616	28,769	76,851	41,182	13,155
1881	7,236	34,095	91,169	45,354	13,185
1882	6,860	31,616	102,552	41,536	14,319
1883	8,323	40,042	94,879	26,878	12,907
Total	32,654	161,077	470,452	207,284	68,531
1884	7,471	36,277	88,624	24,697	14,532
1885	8,742	35,033	99,667	18,284	14,415
1886	9,577	38,329	105,942	20,426	17,437
1887	9,782	37,609	102,362	24,091	12,286
1888	10,760	33,035	91,545	22,818	12,841
Total	46,332	180,226	488,180	110,316	71,511
Average:					
1879–'83	6,531	32,205	94,090	41,457	13,706
1884–'88	9,226	36,057	97,636	22,063	14,302
1889	10,311	29,968	82,128	27,267	11,038
First 10 months of 1890	12,090	25,020	64,492	*46,164	7,034

Year.	Woolen goods.	Silks and silk waste.	Silk goods.	Clothing and under-garments.
	Met. cent.	*Met. cent.*	*Met. cent.*	*Met. cent.*
1879	49,338	9,931	1,423	13,836
1880	43,676	10,199	1,626	13,557
1881	53,637	11,090	1,903	14,577
1882	52,840	6,418	2,929	12,120
1883	46,680	9,965	3,512	11,917
Total	246,171	47,603	11,393	66,007
1884	50,822	8,881	3,563	13,070
1885	46,761	9,886	3,820	13,459
1886	53,393	10,071	5,193	16,226
1887	47,940	9,175	7,301	13,615
1888	47,752	12,274	6,254	14,496
Total	24,668	50,267	26,131	70,866
Average:				
1879–'83	49,234	9,521	2,279	13,201
1884–'88	49,334	10,053	5,226	14,173
1889	51,800	13,262	5,858	12,300
First 10 months of 1890	45,558	11,620	4,436	10,467

*Including 14,407 metre centners of jute goods and 11,341 metre centners of ropes of different fibers.

The exports of Austria-Hungary, which Empire is essentially an agricultural country, include all the products of agriculture, of forestry, and of the mines. The amount of export is growing from year to year, and in 1889 a special increase was noticed.

Table showing the other exports of Austria-Hungary from 1879 to October 31, 1890, inclusive.

Year.	Paper.	Leather.	Leather goods.	Wooden ware.	Brushes, etc.
	Metre cent.	*Metre cent.*	*Metre cent.*	*Metre cent.*	*Metre cent.*
1879	181,375	11,304	15,972	298,037	1,540
1880	219,819	10,118	17,825	332,393	1,593
1881	899,174	12,733	20,538	329,708	1,674
1882	218,914	11,470	22,360	330,035	1,874
1883	256,907	14,270	21,282	286,008	1,947
Total	1,116,189	59,889	97,977	1,576,881	8,628
1884	285,600	12,260	21,389	282,100	2,315
1885	350,023	11,110	21,222	279,822	2,034
1886	329,190	11,598	23,482	287,711	2,069
1887	361,220	8,755	22,767	280,613	1,788
1888	377,098	8,433	25,972	289,861	3,246
Total	1,703,131	52,166	114,832	1,419,107	11,452
Average:					
1879–'83	223,238	11,978	19,595	315,236	1,726
1884–'88	340,626	10,433	22,966	283,821	2,291
1889	*338,305	9,618	25,614	323,408	3,196
First 10 months of 1890	†328,513	9,005	17,185	313,774	3,265

Year.	Basket ware.	Paper goods.	Caoutchouc goods.	Bone goods.
	Metre cent.	*Metre cent.*	*Metre cent.*	*Metre cent.*
1879	3,843	18,631	1,369	2,488
1880	3,336	15,660	1,311	5,202
1881	2,861	20,799	2,090	4,318
1882	2,973	19,262	1,612	5,171
1883	3,256	21,618	2,096	4,256
Total	16,269	95,970	8,478	21,435
1884	3,041	22,441	2,327	3,613
1885	2,512	22,273	1,524	2,941
1886	2,635	23,865	1,430	2,646
1887	2,838	24,987	2,088	2,468
1888	2,800	26,682	2,329	2,758
Total	13,026	120,248	9,698	14,426
Average:				
1879–'83	3,254	19,194	1,696	4,287
1884–'88	2,605	24,050	1,940	2,885
1889	2,849	26,530	1,146	2,717
First 10 months of 1890	5,052	22,548	1,848	2,215

*Not including 296,521 metre centners of pulp.
†Not including 262,658 metre centners of pulp.

Though Austria-Hungary sends a great deal of barley and malt to foreign countries, yet it does not raise a sufficient quantity of maize and rye for its own use. Vegetables are exported even to America.

Austria-Hungary takes the lead of the sugar-exporting countries of Europe and holds a prominent place in the export of flour, wines and liquors, beer, butter, ceresin, raw materials, wax, skins, fowls' eggs, feathers, mineral water, fresh fish, fowl and game, flax, hemp, and wool.

The quantities exported from 1879 to October 31, 1890, inclusive, of the principal articles just named were as follows:

Year.	Sugar.	Flour.	Wine.	Beer.	Liquors.	Wool.
	Metre cent.	*Metre cent.*	*Metre cent.*	*Metre cent.*	*Metre cent.*	*Metre cent.*
1879	2,055,000	2,423,000	435,000	348,000	189,000	76,000
1880	2,342,000	1,301,000	906,000	307,000	205,000	120,000
1881	2,760,000	1,222,000	438,000	318,000	221,000	95,000
1882	2,282,000	1,816,000	410,000	326,000	150,000	97,000
1883	2,604,000	1,872,000	407,000	356,000	295,000	123,000
Total	12,043,000	8,634,000	2,596,000	1,655,000	1,060,000	511,000
1884	3,242,000	1,530,000	451,000	362,000	181,000	114,000
1885	2,414,000	1,500,000	581,000	368,000	262,000	92,000
1886	2,418,000	1,424,000	799,000	385,000	142,000	129,000
1887	2,229,000	1,283,000	705,000	405,000	87,000	66,000
1888	2,360,000	2,061,000	1,028,000	411,000	35,000	90,000
Total	12,663,000	7,728,000	3,564,000	1,931,000	707,000	491,000
Average:						
1879-'83	2,409,000	1,827,000	519,000	331,000	212,000	102,000
1884-'88	2,543,000	1,566,000	713,000	386,000	141,000	98,000
1889	2,970,000	1,761,000	821,000	471,000	214,000	130,000
First 10 months of 1890	3,106,000	1,066,000	564,000	470,000	258,000	117,000

BEET SUGAR IN AUSTRIA-HUNGARY.

The cultivating of the sugar beet is of the greatest moment to the rural economy of Austria, and is now beginning to gain ground in Hungary, too, as the Hungarian Government, cognizant of the importance of beet-root culture for the conservation of the soil, is resolved to further the establishing of sugar factories in Hungary in every manner possible.

During the last two decades the produce of the Austro-Hungarian sugar factories has attained no mean place among the market articles of the world. In 1869 raw sugar first began to become an article of export from Austria to Holland, England, and also to Germany. Up to 1874 the home production of the last-named country was not sufficient to cover its home consumption. The export of sugar has increased from year to year. The following table shows the export of sugar from Austria-Hungary for each month in 1889 and 1890:

Month.	1890.	1889.
	Metre cent.	*Metre cent.*
December	.....	418,309
January	321,532	243,246
February	288,164	173,119
March	438,593	140,284
April	321,202	153,222
May	327,467	238,325
June	278,217	221,634
July	236,809	182,490
August	221,948	54,514
September	108,485	28,681
October	558,158	461,418
November	501,207	666,703

Beet-root sugar has made its way, also, into the United States, and from the time of its being admitted free of duty (April 1, 1891) it will become an article of steadily growing importance.

The value of beet-root sugar exported from Austria-Hungary to the United States was as follows:

Year.	Value.	Year.	Value.
1885	$7,136.46	1888	$403,392.94
1886	273,597.49	1889	305,343.92
1887	35,816.66	1890	3,585,812.52

For the quarter ending December, 1890, the value of the beet-root sugar exported to the United States alone amounted to $1,751,429.11, against $305,343.92 for the 12 months of the calendar year 1889.

In the course of the past year, owing to the Magdeburg sugar ring (broken up in July), prices were subject to very considerable fluctuations, as will be found from the following statement of prices for first product of raw sugar, free to the Bohemian frontier (off Aussegg), per 100 kilogrammes (221½ English pounds), 88 per cent. polarization, bagged gross weight for net (without inland taxes):

Date.	Price.	Date	Price.
	Florins.		*Florins.*
January 1	17.10	March 15	19.60
January 15	17.00	April 1	21.75
February 1	17.00	April 15	23.00
February 15	17.50	May 1	26.59
March 1	18.80	May 15	28.00

Thus, by the machination of the Magdeburg sugar ring, prices for raw sugar had been driven up so as to reach the price for loaves; and on May 25 there was a transaction for 500 metre centners of raw sugar at 31.50 florins, exceeding considerably even the price quoted for double loaves.

By the middle of May the supplies of "prompt" raw sugar in Austria had totally run out, and from that time forward there were no quotations for "prompt good," but only of such of the new harvest of 1889–'90, and these quotations, at the same terms as cited above, were as follows in 1889:

Date.	Price.	Date.	Price.
	Florins.		*Florins.*
June 1	17.50	October 1	15.60
June 15	19.00	October 15	14.75
July 1	20.00	November 2	14.50
July 15	18.20	November 15	14.62
August 1	17.70	December 1	14.50
August 15	18.20	December 16	14.10
September 1	17.10	December 31	14.00
September 15	17.50		

The Austro-Hungarian sugar factories reaped great advantage from the movement of prices in so far that, after having disposed of their first products, very high prices were received for their after products, and they were enabled to realize brilliant transactions for the harvest of 1889–'90, to the amount of more than 200,000,000 metre centners, at prices varying from 17.50 to 20 florins.

For the harvest of 1888–'89 there were working in Austria-Hungary 215 sugar factories and refineries, to wit: Bohemia, 158; Moravia, 50; Silesia, 9; Lower Austria, 3; Hungary, 14. Their number remained unchanged during the harvest of 1889–'90.

The harvest of 1889–'90 showed the produce to be 555,000 tons of raw sugar; the present harvest is estimated at 720,000 tons.

During the harvest just ended sugar beets, being of excellent quality, containing 15 to 18 per cent. of saccharine matter, and with a yield of 200 to 300 metre centners per hectare, have proved a highly remunerative crop to agriculturists. Sugar beets were contracted for with growers at the price of 1.10 to 1.25 florins (prices varying according to location) and above. Besides the price agreed on between the sugar manufacturer and the beet-grower, the latter receives gratis the seed for sowing from the sugar manufactory he enters into contract with, and, furthermore, a quantity of beet cuttings for fodder in proportion to the quantity of beets delivered. These allowances answer to an equivalent of 8 kreutzers per metre centner of beets. At present 90 kreutzers to 1.10 florins is offered per metre centner of beets for the next harvest without having led to any large transactions; and it appears as if the growing of sugar beets for the next harvest is to be considerably reduced.

CHEMICAL INDUSTRY.

Table showing the exports of chemical products from 1879 to October 31, 1890, inclusive.

Year.	Cooking salt.	Chemicals.	Chemical products.	Candles.	Soap.	Matches.
	Metre cent.	*Metre cent.*	*Metre cent.*	*Metre cent.*	*Metre cent.*	*Metre cent.*
1879	367,078	207,560	57,717	5,238	6,551	56,420
1880	288,350	219,252	49,200	4,584	4,955	50,902
1881	265,920	274,829	51,702	4,916	5,113	59,661
1882	300,114	235,131	57,355	4,824	5,160	73,566
1883	251,698	227,620	66,023	6,703	5,168	83,077
Total	1,473,160	1,164,392	281,997	26,265	26,947	323,626
1884	206,144	192,981	68,786	7,071	5,725	92,063
1885	167,175	239,315	76,690	6,072	5,851	97,807
1886	143,955	257,350	78,541	5,194	7,532	93,752
1887	69,489	263,757	79,987	2,880	6,117	76,585
1888	115,089	23,073	86,363	2,714	9,595	89,059
Total	701,852	1,184,476	390,367	23,931	33,820	449,266
Average:						
1879–'83	294,632	232,878	56,399	5,253	5,389	64,725
1884–'88	140,371	236,895	78,073	5,186	6,764	89,853
1889	155,051	257,328	95,816	3,148	9,378	78,140
First 10 months of 1890	49,357	210,136	76,288	1,766	8,212	73,654

NOTE.—1 metre centner=221½ pounds.

VALUE OF EXPORTS, 1879–'88.

The following table shows the value of the Austro-Hungarian exports of raw materials and of manufactured articles from 1879 to 1888:

Year.	Raw material.	Manufactured articles.	Total.
	Florins.	*Florins.*	*Florins.*
1879	305,400,000	378,600,000	684,000,000
1880	304,800,000	371,200,000	676,000,000
1881	339,300,000	392,200,000	731,500,000
1882	381,800,000	400,100,000	781,900,000
1883	348,900,000	401,000,000	749,900,000
Total	1,680,200,000	1,943,100,000	3,623,300,000
1884	307,700,000	383,800,000	691,500,000
1885	304,300,000	367,800,000	672,100,000
1886	316,700,000	381,900,000	689,600,000
1887	313,700,000	359,200,000	672,900,000
1888	355,500,000	373,300,000	728,800,000
Total	1,597,900,000	1,866,000,000	3,463,900,000
Average:			
1879–'83	336,100,000	388,600,000	724,700,000
1884–'88	319,600,000	373,200,000	692,800,000

The increase in the export of costly and expensive articles is larger than that of cheap goods. This is due to the high tariffs of most countries, which prevent the importation of cheap wares but do not affect articles of value. This is especially noticeable in regard to glassware, porcelain, fancy goods, and metal ware.

The future of the Austro-Hungarian export lies in the development of its art industries. Not quantity, but quality, must determine the success of its articles and the extent of its trade.

IMPORTS FROM THE UNITED STATES.

The following table gives the value of the chief articles imported into Austria-Hungary from the United States for the fiscal year 1888–'89:

Articles.	Value.	Articles.	Value.
Cotton	$275,275	Turpentine	$16,829
Machines:		Paraffine, etc.	4,144
Agricultural	12,325	Fancy goods	8,152
Sewing	1,111	Wood, cut	10,264
Mineral oil:		Other wares	11,247
Crude	241,924	Total	720,815
Refined	50,941		
Resins and gums	77,464		

From a comparison of the two preceding statements of import, the fact will strike the reader that in more than 1,000,000 metre centners of cotton the United States participates to the amount of only $275,275. This,

however, is explained by the fact that of the 100,000 to 150,000 bales of American cotton introduced into this country the greater part is imported by way of Germany and England, as there is no direct line of connection between the United States and the seaports of Austria-Hungary.

IMPORTS OF AUSTRIA-HUNGARY.

The following table shows the articles inported into Austria-Hungary during the years 1886–'89. Imports of less than 100,000 metre centners in 1889 are summed up under "miscellaneous."

Articles.	1886.	1887.	1888.	1889.
	Metre cent.	*Metre cent.*	*Metre cent.*	*Metre cent.*
Mineral coal and coke	27,212,790	28,747,564	32,635,859	34,440,812
Cotton, cotton waste, and wadding	975,660	1,151,704	1,039,613	1,117,209
Iron and ironware	919,577	750,275	940,101	1,171,101
Grain	2,504,821	2,156,311	938,228	1,051,810
Wood	1,800,585	1,517,031	1,526,245	1,585,171
Mineral oils:				
Crude	928,021	891,862	1,074,599	1,188,379
Refined	360,444	241,142	127,974	146,875
Cabinet wood	1,155,238	890,570	967,303	1,112,403
Iron, crude	547,648	491,384	628,300	811,342
Earthenware	715,741	724,710	657,832	625,330
Chemicals	490,387	485,832	488,481	535,945
Maize	1,052,947	838,451	560,694	554,976
Wood for fuel	630,599	615,640	505,787	448,353
Dyes and articles for tanning	393,469	398,120	375,117	426,592
Rice	585,912	636,289	502,983	593,062
Oranges, lemons, figs, etc	312,704	336,107	445,538	457,805
Coffee	375,594	319,382	344,857	346,163
Machines	215,452	230,078	252,552	314,349
Hardware	247,737	223,439	270,100	239,678
Fats of all kinds	192,425	224,450	209,395	229,308
Flax and hemp	301,276	303,191	307,731	281,361
Oats	170,856	195,207	113,398	246,409
Gums and resins	249,045	278,201	260,302	287,961
Metals	220,827	241,722	180,022	249,361
Oils, fat	197,349	229,038	193,184	200,923
Salt	219,690	218,003	214,028	213,588
Wool	226,451	268,009	245,875	286,177
Cotton yarn	111,644	110,061	98,356	110,850
Scrap iron	124,192	35,452	41,701	120,081
Victuals	207,139	215,716	158,422	156,094
Hides and skins	193,445	202,986	200,169	188,128
Cocoa and palm oil	87,550	98,201	101,371	111,026
Wooden ware	87,899	87,865	107,179	124,896
Jute	160,951	157,692	225,356	197,378
Potatoes	229,803	224,890	231,226	188,005
Oilseed	50,553	58,695	131,187	136,577
Oranges	75,767	84,819	166,572	173,095
Tobacco	146,147	160,695	131,070	124,562
Zinc	131,505	127,494	95,229	103,410
Miscellaneous	1,238,996	1,298,073	1,064,020	1,160,392

AUSTRIAN INDUSTRIES.

The rich harvests of 1889 and 1890 and the rising prices on all articles of trade tended greatly to the development of Austro-Hungarian industries.

Ceramic and glass.—The ceramic and glass industry shows a year of great prosperity, and the advantages resulting from the development of the artistic sense by schools of art are clearly manifested, as Austrian wares are greatly sought after in foreign markets and are sold at high prices.

Wood.—Of these industries, which are furthered by the great abundance of suitable material in this Monarchy, the manufacture of bent-wood furniture holds the most prominent place and forms an article of export which increases from year to year. Articles carved out of wood, bone, horn, etc., are growing in importance and form a welcome source of income to the indigent inhabitants of the Erzgebirge and of the Alps of Salzburg and Tyrol.

Wool.—This is classed among the oldest industries in this Empire, and in these latter years has furnished employment for 60,000 workmen.

The general strike last year led to some improvement in the wages of the workmen.

In Austria there are 10 spinning mills for worsted with 240,000 spindles, 450,000 spindles for yarn, 6,800 power looms and 11,000 hand looms for woolens, and 12,500 power looms and 9,000 hand looms for worsted goods.

Turkish caps, or fezzes, are exported in great quantities. They are manufactured on a large scale in western Bohemia and in the northern part of Moravia.

Cotton.—This industry is represented in Austria by about 650 factories with 2,000,000 spindles and 5,000 power looms, giving employment to 100,000 hands. Besides these there are 2,900 small factories with hand looms.

Paper.—Paper-making is on the increase, which is principally due to the founding of new paper mills for wood and straw paper.

Domestic trade.—Domestic trade in Austria-Hungary, owing to the good harvest of 1888, started under favorable auspices, but received a check by the poor harvest of 1889, when it abated considerably, which caused great complaint among the tradespeople, who were especially dissatisfied with the Christmas season.

HUNGARIAN INDUSTRIES.

The development of industrial arts in Hungary, with the exception of mill industry, is rapidly progressing, not only on account of an increased amount of work on the part of the old, but more especially by the founding of new, factories.

The wool industry of Hungary is still in its infancy. The Hungarian Government recently entered upon a compact with Adolf Lŏw & Son, at Brinn, the largest manufacturing firm in Austria, by which that house is pledged to erect a woolen factory in Hungary with a capital of 1,000,000 florins. The Government fosters the undertaking by certain privileges, such as exemption from all taxes for 20 years to come.

In 1889 the following factories were built: One for the manufacture of arms, at Buda-Pesth; 1 for worsted goods, at Waitzen; 6 large sugar refineries, at Mezehögyes, Syerenes, Silyp, Bothfalva, Hatvan, and Temesvar; the International Electric Light Company, a factory for nails and screws, 1

for agricultural machines, a stock company for building enterprises; a paper mill, at Yenica; a factory for chemicals; 1 for cognac, at Kaposvar; 1 for barrels and boxes, at Fiume; 1 for paraffine, at Szamos-Udvarhely.

There are now in course of erection 2 large cloth manufactories, a machine shop, a factory for wire tacks, a brewery, and a factory for artificial manure.

All these undertakings enjoy certain privileges, such as (1) exemption from all taxes for a certain number of years; (2) dispensation from any dues for stamps or registration, as prescribed by law, for the purchase of real estate; (3) stock companies formed for one of the aforesaid purposes are freed from the use of stamps or from the payment of any dues for contracts, shares, and documents; (4) new industrial undertakings may be supplied with impure salt for industrial purposes at a price lower than that prescribed by the law of the country.

A bill has recently been passed by the Hungarian Parliament which provides for the advancement of manufacturing industry in Hungary.

VIENNA INDUSTRIES.

Of the many articles made in this city the following may be mentioned:

Fancy goods.—Fancy goods play the most prominent rôle among Vienna specialties and can not be competed with elsewhere. Under this heading are included bronze goods, leather ware, trunks and valises, canes and umbrella sticks, fancy metal ware, pearl buttons, harmonicas, meerschaum and amber, fans, umbrellas, and parasols.

Bronze goods.—Bronze goods are unsurpassed, and the exquisite novelties which the manufacturers produce in this line season after season seem to be endless. The United States, the El Dorado of Viennese art industries, has levied a heavy duty upon this article. The export to Spain and Italy has fallen off somewhat; but, on the other hand, the trade with South America has increased. There is also a large amount annually sent to Russia and France.

Leather industry.—The past year may be called favorable to the leather industry. The various novelties in this line, such as albums, cardcases, pocketbooks, cigar and cigarette cases, photograph cases, writing cases, etc., are exquisite. Articles made of pressed leather are especially noted.

Canes and umbrella sticks.—The manufacture of canes and umbrella sticks has been very successful. These goods find a ready sale in every country of the world's market; but, in spite of many circumstances favorable to the export of these articles, a spirit of discontent prevails among the small manufacturers, for any success in this industry seems chiefly to benefit only the large manufacturers. In this branch, as in many others, house industry can not compete with large manufacturing establishments. Canes and umbrella sticks are admitted into the United States free of duty.

Fancy metal ware.—This industry has been suffering from overproduction, but is somewhat reviving now.

Pearl buttons.—So much has been written about the mother-of-pearl industry that there remains very little to be said about it. For years past that industry has been most prosperous, and the export of pearl buttons to the United States amounted to millions of florins a year. The new tariff law has put a check upon this large export, and, in order that the mother-of-pearl workers might not be starved, the large manufacturers and exporters of Vienna have turned their attention to other articles in this line and are depending more upon domestic trade than formerly.

A mother-of-pearl exhibition recently opened in this city shows the various designs made of pearl and the many purposes for which it may be used, as for paper knives, inkstands, lamp shades, hair ornaments, and trimmings for dresses, cloaks, hats, etc. Orders for better grades of pearl buttons are, however, soon to be expected, in spite of the high tariff.

Fans.—Fans are a very important article of trade. Paris and London are the principal markets. Fans are made of all sizes and varieties, of feathers, silk, or lace, plain or hand painted. The sticks are of wood, pearl, or tortoise shell.

Parasols and umbrellas.—These are exported to a great extent and are much sought after, owing to the many varieties of silks and the uniformity of handles.

Other industries of importance besides that of fancy goods are:

Silks and velvets.—These goods are sent in large quantities to all foreign markets, and especially to the United States.

Glove industry.—This has not been very successful during the past year, partly owing to the dearness of raw material and partly to a depression of the prices allowed by English and American importers for the ready-made article. However, in spite of the good material and the neat and tasteful make of this article, it has of late shown no advancement.

Artificial flowers and feathers.—The export of these shows a decided reduction, due to the high tariffs of Roumania and Russia and to the competition of other countries. Great quantities are made here, and, though cheap, are very beautiful.

Soaps and perfumes.—These hold their own, in spite of French competition, and are exported to a great extent. A special kind of toilet soap called "fruit soap" is sent in large quantities to the Orient.

Cognac and champagne.—This industry, though only recently established here, is growing in importance and will soon compete with that of France. As yet prices are quite moderate.

Furniture.—This industry occupies a prominent place among Vienna manufactures, but of late it has become very unsatisfactory, and chiefly on account of the high tariffs of Roumania.

Brushes.—The export of brushes has not varied and is chiefly directed to the Orient, India, Spain, and the United States.

AUSTRIAN MINES AND FURNACES.

The total value of the product of mines in Austria for 1889, as shown by the statistical year book of the Austrian ministry of agriculture, was 58,939,809 florins, an increase of 4,976,028 florins, or 9.22 per cent., as compared with 1888.

The value of the product of furnaces for the same period was 32,748,497 florins, or 6.62 per cent. increase as compared with 1888. Crude iron contributed 72 per cent. to the total of the value.

The total value of the Austrian product of mines and smelting furnaces for 1889, the value of ore before smelting not included, was 78,806,679 florins, of which 46 per cent. was produced in Bohemia, 14 per cent. in Styria, 14 per cent in Silesia, and 9 per cent. in Moravia, and the value of each of the different products representing the total value and their percentage were as follows:

Table showing the value of the product of mines and furnaces, with percentage of total.

Products.	Value.	Percentage of total.
Mines.	*Florins.*	
Anthracite coal	26,647,937	45.21
Bituminous coal	22,861,112	38.79
Silver ore	3,130,016	5.31
Iron ore	2,487,873	4.22
Lead ore	1,137,547	1.93
Mercurial ore	850,052	1.44
Graphite	702,123	1.19
Zinc ore	432,910	0.74
Copper ore	313,699	0.53
Sulphur ore, alum, and vitriol	162,767	0.28
Other ores and minerals	213,773	0.36
Total	58,939,809	.....
Furnaces.		
Pig-iron	23,577,454	72
Silver	3,198,420	9.77
Lead and litharge	1,770,003	5.4
Quicksilver	1,537,015	4.69
Zinc	1,101,028	3.36
Copper	583,638	1.78
Sulphuric acid and oleum	522,356	1.6
Green vitriol and alum	146,687	0.45
Other metals and smelting products	311,896	0.95
Total	32,748,497	.....

The amount of salt produced was 312,956 metre centners, valued at 21,575,855 florins, and chiefly from Upper Austria, Salzburg, and Galicia.

In Austria there were at work 642 mining undertakings and 107 furnaces, the former giving employment to 100,497 hands, the latter to 13,461, making a total of 113,958 hands, of whom 101,694 were men, 6,683 women, 5,330 youths, and 251 children.

Table showing the number of employés in the anthracite coal mines in the various crown lands in 1889.

Crown land.	Mines.	Working people.				
		Men.	Women.	Youths.	Children.	Total.
Bohemia	90	17,773	1,273	1,244	176	20,466
Lower Austria	10	524	3	4	.....	531
Upper Austria	13	1	.....	.....	.....	1
Salzburg	17	.....	.....	.....	.....	.....
Moravia	13	4,782	413	275	.....	5,470
Silesia	17	14,431	11,613	1,452	10	17,506
Styria	1	4	.....	.....	.....	4
Galicia	3	1,700	110	28	.....	1,838
Total	134	39,215	3,412	3,003	186	45,816
Total in 1888	138	37,711	3,264	2,637	18	43,630
Increase	.....	1,504	148	366	168	2,186
Decrease	4	.....	.....	.....	.....	.....

Table showing the number of employés in the bituminous coal mines in the various crown lands in 1889.

Crown land.	Mines.	Working people.				
		Men.	Women.	Youths.	Children.	Total.
Bohemia	187	19,687	648	330	.....	20,665
Lower Austria	1	28	.....	.....	.....	28
Upper Austria	4	1,148	75	131	.....	1,354
Moravia	8	461	5	13	.....	479
Silesia	1	2	1	.....	.....	3
Styria	56	8,698	834	274	1	9,807
Carinthia	10	466	69	6	.....	541
Tyrol	1	238	14	32	.....	284
Vorarlberg	.....	3	.....	.....	.....	3
Carniola	8	640	12	39	.....	691
Dalmatia	4	197	27	3	.....	227
Istria	1	980	.....	56	.....	1,036
Galicia	4	136	.....	.....	.....	136
Total	285	52,684	1,685	884	1	35,254
Total in 1888	289	30,642	1,773	728	153	33,296
Increase	.....	2,042	.....	156	.....	1,958
Decrease	4	.....	88	.....	152	.....

Table showing the number of employés in the iron-ore mines in the various crown lands in 1889.

Crown land.	Mines.	Working people.				
		Men.	Women.	Youths.	Children.	Total.
Bohemia	18	1,069	.....	26	.....	1,095
Lower Austria	3	63	6	.....	.....	69
Salzburg	1	52	.....	.....	.....	52
Moravia	7	252	1	18	.....	271
Silesia	3	48	.....	.....	.....	48
Styria	11	2,285	23	130	.....	2,438
Carinthia	2	576	.....	.....	.....	576
Tyrol	3	54	.....	.....	.....	54
Carniola	5	190	.....	15	.....	205
Galicia	6	116	27	.....	11	154
Total	59	4,705	57	189	11	4,962
Total in 1888	55	4,256	43	100	5	4,404
Increase	4	449	14	89	6	558

Table showing the number of employés in the other mines (salt mines not included) in the various crown lands in 1889.

Crown land.	Mines.	Working people.				
		Men.	Women.	Youths.	Children.	Total.
Bohemia	45	7,273	122	268	.....	7,663
Lower Austria	6	48	.....	.....	.....	48
Salzburg	4	406	.....	12	4	422
Moravia	12	188	26	28	.....	242
Silesia	2	19	.....	.....	.....	19
Bukowina	1	100	8	68	36	212
Styria	22	260	49	10	.....	319
Carinthia	17	1,625	509	119	11	2,264
Tyrol	34	871	29	47	.....	947
Carniola	11	1,163	95	81	.....	1,339
Dalmatia	2	5	.....	.....	.....	5
Galicia	8	637	323	25	.....	985
Total	164	12,595	1,161	658	51	14,465
Total in 1888	155	12,214	957	1,144	16	14,331
Increase	9	381	204	.....	35	134
Decrease	.....	.....	.....	486	.....	.....

Table showing the total number of employés in mines (salt mines not included) in the various crown lands in 1889.

Crown land.	Mines.	Working people.				
		Men.	Women.	Youths.	Children.	Total.
Bohemia	340	45,802	2,043	1,868	176	49,889
Lower Austria	20	663	9	4	.....	676
Upper Austria	4	1,149	75	131	.....	1,355
Salzburg	5	458	.....	12	4	474
Moravia	40	5,683	445	334	.....	6,462
Silesia	23	14,500	1,614	1,452	10	17,576
Bukowina	1	100	8	68	36	212
Styria	90	11,247	906	414	1	12,568
Carinthia	29	2,667	578	125	11	3,381
Tyrol	38	1,163	43	79	.....	1,285
Vorarlberg	.....	3	.....	.....	.....	3
Carniola	24	1,993	107	135	.....	2,235
Dalmatia	6	202	27	3	.....	232
Istria	1	980	.....	56	.....	1,036
Galicia	21	2,589	460	53	11	3,113
Total	642	89,199	6,315	4,734	249	100,497
Total in 1888	637	84,823	6,037	4,609	192	95,661
Increase	5	4,376	278	125	57	4,836

Table showing the number of employés in the smelting works for crude iron in the various crown lands in 1889.

Crown land.	Works.	Working people.				
		Men.	Women.	Youths.	Children.	Total.
Bohemia	7	5,319	26	240	.....	5,585
Lower Austria	3	227	5	.....	.....	232
Salzburg	1	153	.....	17	.....	170
Moravia	7	2,002	138	164	.....	2,304
Silesia	4	1,083	.....	62	.....	1,145
Styria	16	1,021	49	12	.....	1,082
Carinthia	4	393	19	6	.....	418
Tyrol	2	192	1	11	2	206
Carniola	5	195	7	12	.....	214
Galicia	1	31	.....	.....	.....	31
Total	50	10,616	245	524	2	11,387
Total in 1888	48	10,270	233	404	2	10,909
Increase	2	346	12	120	.....	478

Table showing the number of employés in the smelting works for other crude metals and smelting products in the various crown lands in 1889.

Crown land.	Works.	Working people.			
		Men.	Women.	Youths.	Total.
Bohemia	31	854	43	35	932
Salzburg	3	124	.....	2	126
Styria	2	149	1	.....	150
Carinthia	9	150	4	.....	154
Tyrol	5	66	.....	3	69
Carniola	5	368	15	.....	383
Galicia	2	168	60	32	260
Total	57	1,879	123	72	2,074
Total in 1888	58	1,941	144	48	2,133
Increase	.....	.....	.....	24	.....
Decrease	1	62	21	.....	59

Table showing the total number of employés in smelting works in the various crown lands in 1889.

Crown land.	Works.	Working people.				
		Men.	Women.	Youths.	Children.	Total.
Bohemia	38	6,173	69	275	.....	6,517
Lower Austria	3	227	5	.....	.....	232
Salzburg	4	277	.....	19	.....	296
Moravia	7	2,002	138	164	.....	2,304
Silesia	4	1,083	.....	62	.....	1,145
Styria	18	1,170	50	12	.....	1,232
Carinthia	13	543	23	6	.....	572
Tyrol	7	258	1	14	2	275
Carniola	10	568	22	12	.....	597
Galicia	3	199	60	32	.....	291
Total	107	12,495	368	596	2	13,461
Total in 1888	106	12,211	377	452	2	13,042
Increase	1	284	.....	144	.....	419
Decrease	.....	.....	9	.....	.....	.....

The working people employed in the mining of salt numbered 10,005, of whom 6,372 were men, 1,127 women, 1,141 youths and 1,063 children.

The wages earned by miners, etc., will be mentioned under the head of "labor and wages." Of the 113,958 working people engaged in mines and furnaces in Austria, 192 were killed and 270 severely wounded during the year past.

MINE STATISTICS OF THE WORLD.

From a work by Henry Couriot, entitled "l'Industrie des mines en France et à l'étranger," the following statistics are taken:

Table showing the world's mine products.

Products.	Quantity.	Value.
Metals:	*Tons.*	*Francs.*
Iron	23,512,000	1,624,374,000
Gold	(*)	549,500,000
Silver	†4,000	764,800,000
Copper	341,000	541,664,000
Lead	517,000	199,859,000
Zinc	344,000	151,644,000
Tin	35,000	98,626,000
Mercury	4,000	22,103,000
Nickel, cobalt, platinum, antimony	3,000	15,176,000
Total	24,760,000	3,967,746,000
Nonmetals:		
Coal	466,406,000	3,412,000,000
Petroleum	5,712,000	264,643,000
Bituminous slate and asphaltum	2,499,000	20,430,000
Rock salt, etc.	8,347,000	125,356,000
Manganese, pyrites, sulphur, etc.	1,215,000	50,022,000
Total	508,939,000	7,780,197,000
Building material	.....	800,000,000
Precious stones	.....	300,000,000
Total	.....	8,880,197,000

* 146,225 kilogrammes. † 3,720,951 kilogrammes.

Thus it will be seen that coal represents above 40 per cent. of the whole value, and that in 1888 the production of precious metals, which once constituted the greatest source of wealth, did not amount to one-eleventh of the value of the coal produced.

Table showing the coal fields of the world and their output.

Countries.	Area.	Quantity of coal produced.	Average price per ton.	Total value.	Working population.	Consumption of coal per head of population.
	Kilometres.	*Tons.*	*Francs.*	*Francs.*	*Number.*	*Tons.*
United States	490,700	132,548,844	8.07	1,200,000,000	283,125	2.945
England	33,000	169,935,219	6.35	1,079,000,000	524,945	4.55
Germany	31,000	81,873,848	5.82	477,000,000	258,388	1.6
Russia	28,300	4,580,223	8.00	37,000,000	33,000	0.07
France	5,581	22,602,894	10.31	233,000,000	104,959	0.854
Austria-Hungary	2,600	23,647,000	5.23	124,000,000	97,200	0.625
Belgium	1,350	19,218,481	8.43	162,000,000	103,477	2.4
Other countries	10,000	12,000,000	8.30	100,000,000	60,000	.....
Total	602,531	466,406,509	7.08	3,412,000,000	1,475,094	0.325

Deaths in coal mines.—In England there were the following number of deaths resulting from accidents in coal mines during these last four decades: Of 100,000 workmen the annual deaths from accidents were, from 1851 to 1860, 407; from 1871 to 1880, 233; and from 1881 to 1887 there were but 199; thus showing a reduction of more than one-half.

In other European countries there occurred the following number of deaths from accidents in coal mines per annum per each 100,000 workmen: In Saxony, 339; Prussia, 273; Belgium, 232; Austria, 230; England, 199; and France, 156.

PUBLIC DEBT.

Debt common to both Austria and Hungary.

	Florins.
Amount on June 30, 1889	2,442,568,483.83
Common floating debt (bank notes at 1, 5, and 50 florins, redeemable by Government and in circulation on June 30, 1889)	313,209,578.00
Consolidated debts:	
Unredeemable	2,129,322,905.83
Redeemable	262,774,484.00
Floating debt, inclusive of the so-called "Partial Hypothecar-anweisungen"	100,084,877.89½
Amount of capital for indemnity of bonds	11,960,471.10
Amount of capital for payment to the Bavarian Government	1,750,000.00

The annual requirement for interest and bonds (taxes deducted) is 115,909,783.89 florins, to which, according to a financial agreement between Austria and Hungary, the latter contributes the amount of 29,188,000 florins, besides another amount of 1,150,000 florins for interest on and redemption of a loan contracted by a former government.

The revenues are chiefly derived from direct taxes, excise duties, revenue-stamp tax, monopolies, and receipts from public works and domains in each of the two parts of the Empire, and will be stated under the head of "finances" in the budgets for Austria-Hungary, for Austria, and for Hungary.

Public debt of Austria.

	Florins.	Florins.
Total on June 30, 1889		1,057,354,334.64½
Annual requirement for interest (after the deduction of taxes):		
In bank notes	13,433,170.94	
In silver	12,743,786.72	
In gold	19,903,388.00	
		46,080,345.66
Total amount of "Grundentlastungs-Schuld" of the Austrian crown lands on June 30, 1889		75,780,789.00
Requirement for interest after the deduction of 10 per cent. for taxes		3,732,951.60

Public debt of Hungary.

Total, December 31, 1887	1,545,792,269.00

More recent or general data are not obtainable here.

BUDGETS.

According to the constitution of Austria-Hungary, there are placed for consideration before the different legislative bodies three distinct state budgets for each fiscal year, to wit:

General Austro-Hungarian budget.—This is referred to a joint delegation from Austria and Hungary, and has reference to such expenditures as are defrayed in common by both, viz, expenditures for representation of the monarchies in foreign countries, for the army and navy, and for the governing of the *Reichslande* (territories) of Bosnia and Herzegovina.

For the fiscal year 1890 the provisions made for the joint government of Austria-Hungary, under the presidency of Count Kalnocky, are as follows:

Ordinary expenditures.

	Florins.
Common ministry of the exterior	4,185,100.00
Ministry of war:	
Army	98,360,820.00
Navy	9,254,877.00
Ministry of finance	2,000,963.00
Auditing and comptrolling department	128,400.00
Total	113,930,160.00

Extraordinary expenditures.

	Florins.	
Ministry of the exterior	173,400.00	
Ministry of war:		
Army	13,358,948.00	
Navy	1,889,200.00	
		15,421,548.00
Total		129,351,708.00
Less:		
Revenues from such duties as are declared common property of both realms	39,733,750.00	
Præcipium, according to convention laid to the charge of Hungary	1,792,359.16	
		41,526,109.16
Net expenditure		87,825,598.84

To this Austria contributed 61,477,919.19 florins, or 70 per cent.; Hungary, 26,347,678.65 florins, or 30 per cent. Besides this, the two dominions must furnish at the above ratio (30 and 70 per cent.) the sum of 4,370,000 florins, provided for the Austro-Hungarian army in Bosnia and Herzegovina, which territories are still considered as being under military occupation. The cost of the civil government of Bosnia and Herzegovina is met by the levying of taxes within said territories.

Budget of Austria.—This budget for the fiscal year 1890 was laid before the House of Deputies by the secretary of finance on December 3, 1889, at the same time with an ordinance to grant power for the collection of taxes according to regulations and also to concede the right of preliminary expendi-

tures according to the Austro-Hungarian budget, as cited above. After a violent debate the proposition was passed by the vote of a very small majority.

Table showing the revenues and expenditures of Austria in 1889 and 1890.

REVENUES.

Description.	1890.			Total in 1889.
	Ordinary.	Extraordinary.	Total.	
	Florins.	*Florins.*	*Florins.*	*Florins.*
Ministerial council	718,800	.....	718,000	722,000
Ministries:				
Interior	1,159,201	.....	1,159,201	1,144,206
National defense	266,156	.....	266,156	269,279
Education and religious institutions	5,900,204	39,240	5,939,444	5,783,421
Finance	429,486,513	4,636,232	434,122,745	431,197,154
Commerce	79,757,030	1,809,709	81,566,739	77,145,930
Agriculture	11,811,932	8,775	11,820,707	12,196,393
Justice	901,700	.....	901,700	859,140
Pension fund	90,849	.....	90,849	83,716
Subsidies and dotations	.....	483,042	483,042	2,687,400
Public debt	.....	10,360,611	10,360,611	10,054,715
Management of public debt	515,570	.....	515,570	522,590
Sale of national real estate	.....	159,140	159,140	150,000
Total	530,607,955	17,496,749	548,104,704	542,815,944

EXPENDITURES.

Court	4,650,000	.....	4,650,000	4,650,000
Imperial bureau	74,978	.....	74,978	73,390
Reichsrath (parliament)	722,439	28,915	751,354	710,490
Reichsgericht (court of the realm)	22,600	.....	22,600	22,600
Ministerial council	1,042,487	3,400	1,045,887	1,042,017
Quota to general budget	96,769,719	2,997,820	99,767,539	104,656,002
Ministries:				
Interior	16,595,255	2,889,437	19,484,692	19,111,249
National defense	13,497,066	3,444,694	16,941,760	13,753,419
Education and religious institutions	20,627,548	1,164,970	21,792,518	21,424,667
Finance	84,135,878	5,042,676	89,178,554	88,383,791
Commerce	63,570,420	15,247,110	78,817,530	70,608,380
Agriculture	12,058,958	2,060,912	14,119,870	14,499,255
Justice	20,337,900	655,295	20,993,195	20,873,385
First auditor's office	167,000	700	168,400	167,700
Pensions	17,462,000	1,280	17,463,280	17,002,535
Subsidies and dotations	1,331,130	9,597,315	10,298,445	12,656,280
Public debt	143,797,135	4,826,303	148,623,303	149,239,480
Management of public debt	896,760	50,900	947,660	985,250
Total	497,759,973	48,011,727	545,771,700	540,045,885

This is the first budget during the 10 years' office of the present minister of finance which does not show a deficit, but a surplus of 2,333,004 florins, an apparent success that could not be reached but by an enormous raising of the inland duties on sugar and alcohol. As the claims of the ministry of war have been increasing with each successive year, and as these claims could not be met by the resources then existing, the public debt of Austria shows

during the official term of the minister of finance an increase of 650,000,000 florins. Furthermore, the small surplus seems to be more than counterbalanced by a declaration of the minister of finance that, on the reassembling of the House, he would require for some of the different departments an additional sum of from 4,000,000 to 5,000,000 florins, a detailed account of which would then be laid before the House.

Budget of Hungary.—The following table shows the revenues and expenditures of Hungary in 1889:

Description.	Amount.	Description.	Amount.
Expenditures.	*Florins.*	*Expenditures*—Continued.	*Florins.*
Court	4,650,000	Auditor's office	110,100
Imperial bureau	73,380	Advance of interest to railroads	4,865,691
Hungarian Parliament and delegation	1,253,671	Total	330,656,924
Ministerial presidency	104,800	Running expenditures	4,238,243
Ministries:		Investigations	13,238,870
Croatia and Slavonia	36,080	Extraordinary expenditures common to both realms	8,670,245
Court	54,020	Total expenditures	356,804,282
Interior	11,525,154		
National defense	9,814,121	*Revenues.*	
Educational and religious institutions	6,707,788	Direct taxation	97,733,000
Justice	12,095,282	Interest on taxes unpaid	1,227,000
Agriculture and commerce	11,639,472	Arrears of taxes	440,000
Communication	43,475,523	Indirect taxation, excise duties, monopolies, etc.	146,434,323
Finance	56,699,137	Income from national property and institutions	42,805,896
Administration of Croatia and Slavonia	6,063,530	Income from other ministeries	55,216,017
Administration of Fiume	30,130	Total	343,856,236
Pensions	5,789,142	Running income	6,806,988
Hungarian debt	82,825,282	Total revenues	350,663,224
Redeemable mortgage	17,136,194		
Quota of expenditures common to both realms	23,027,919		
Quota of debt common to both realms	30,312,920		

This shows the expenditures for 1889 to be greater by 6,141,058 florins than the revenues.

Provincial budgets.—Besides the three principal budgets specified above, each of the separate crown lands has its special crown-land budget. Of Austrian crown lands there are seventeen, and each of them has to provide for the maintenance of highroads, of the primary and middle schools (gymnasiums, schools for industry, etc.); of charitable institutions, as hospitals, asylums for the deaf and dumb, for the blind, etc.; as also for the defrayment of expenses for interest and annuities of the *Grundentlastung* (sinking fund for real estate).

The seventeen *Landesbudgets* (crown-land budgets) represent the sum of nearly 120,000,000 florins, which is collected in addition to the direct State taxation; this addition amounts to 25 per cent., or even higher.

In the same manner the separate *Landesbudget* for the Hungarian crown lands of Croatia and Slavonia is provided for by the *Landtag* (county session) common to both of these provinces.

Communal budgets.—But the claims of the State upon its subjects and the exactions burdened on the citizens do not, by any means, end with this. Thus, each separate commune is held to collect the greater part of the imposts assessed by the State and by the province or crown land and to forward the proceeds without being allowed any indemnification whatever for the work or expenses caused thereby; and, aside from the obligation of each commune of erecting and keeping in good state the buildings for schools and paying the wages of teachers and servants of primary schools, it has also to defray any expenditures arising from such middle schools as, from the initiative of the commune, have been deemed necessary of being erected.

As an illustration thereof the budget of the city of Vienna may find a place here:

	Florins.
Current expenses	19,942,120
Extraordinary expenditures	1,777,610
Total	21,719,730

The most essential items of this total are:

	Florins.
General administration	2,250,000
Interest on commune debt	4,400,000
Public works (street-paving, sewerage, etc.)	4,000,000
Public safety (police, etc.)	1,000,000
Almonry, etc	1,000,000
Sanitary administration	500,000
Markets, public places, etc	750,000
Schools, etc	4,750,000

The resources of the city consist in a revenue of about 6,000,000 florins derived from the property of the city and from administration. The remaining 15,000,000 florins are raised by a per cental addition to the rent paid for lodgings and State taxation.

BANKS AND BANKING.

The leading bank of Austria-Hungary is the Österreichisch-Ungarische National Bank (Austro-Hungarian National Bank), which is the only bank of issue for Austria-Hungary.

The statutes of this institution, its manner of doing business, etc., have before this been sufficiently dilated upon by the CONSULAR REPORTS.

The capital stock invested consists of 90,000,000 florins, the reserve funds amounting to over 20 per cent. of the capital stock.

The following figures give the status of the four principal banks of Europe for the years 1887–'91: *

Year.	Austro-Hungarian Bank.			German Reichsbank.		
	Bullion.	Notes in circulation.	Portfolio.	Bullion.	Notes in circulation.	Portfolio.
	Florins.	*Florins.*	*Florins.*	*Marks.*	*Marks.*	*Marks.*
1887	205,100,000	347,900,000	118,900,000	703,900,000	878,600,000	426,900,000
1888	241,900,000	366,000,000	130,100,000	814,100,080	[illegible]7,100,000	489,000,000
1889	234,100,000	386,700,000	130,100,000	897,800,000	[illegible] 400,000	459,700,000
1890	241,900,000	397,200,000	138,800,000	779,800,000	1,00[illegible],600,000	535,600,000
1891	244,800,000	410,600,000	139,500,000	817,200,000	958,800,000	496,200,000

Year.	Bank of England.			Bank of France.		
	Bullion.	Notes in circulation.	Portfolio.	Bullion.	Notes in circulation.	Portfolio.
				Francs.	*Francs.*	*Francs.*
1887	£20,000,000	£24,000,000	£23,700,000	2,352,900,000	2,877,500,000	701,800,000
1888	20,600,000	23,800,000	25,500,000	2,279,700,000	2,836,100,000	663,300,000
1889	21,200,000	23,400,000	25,400,000	2,220,200,000	2,737,400,000	681,200,000
1890	19,200,000	23,800,000	22,800,000	2,495,800,000	3,170,200,000	795,300,000
1891	24,200,000	24,200,000	32,600,000	2,324,200,000	3,187,500,000	1,270,200,000

Besides the Austro-Hungarian National Bank, there exist fifteen other banks, all of them in Vienna, which carry on all kinds of banking transactions, such as the receiving of deposits, granting loans on goods, stocks, and bills of exchange, lending money on mortgages, etc. The capital stock invested in these banks, the chief of which are the Credit Anstalt für Handel und Gewerbe (Credit Institution for Trade and Industry), the Länderbank, and the Bodencreditanstalt (Credit Institution for Real Estate), amounts to about 200,000,000 florins, yielding to shareholders returns varying from 5 to 12 per cent. for these latter years.

To these banks might also be added the Erste Österreichische Sparkasse (First Austrian Savings Bank), which, although established only for the purpose of receiving deposits and originally granting loans only on mortgages, has for several years back been advancing money on public securities, shares, etc., and discounting bills of exchange. This institution, founded in 1819, operates with funds deposited to the amount of 170,000,000 florins, and with reserve funds representing its capital stock of 6,000,000 florins. Notwithstanding this disproportionate showing, it is considered the safest institution of the Monarchy, on account of its operating with the greatest caution.

Throughout the Austrian provinces there exist 40 banking institutions and *Hypothekenbanken* (banks for investments on mortgages) with capital stock of 34,000,000 florins. Nearly all of them are managed in the best manner and yield to shareholders a dividend of 6 to 10 per cent.

*NOTE BY THE DEPARTMENT.—For purposes of comparison the following values are given: Austria-Hungary, gold florin=48.2 cents, paper florin=42 cents; German mark=23.8 cents; French franc=19.3 cents; English pound sterling=$4.86.6½.

Besides these, there are in Austria 402 savings banks, which use their deposits only in the way of mortgaging. In accordance with their organizations, they are classified into savings banks for communities, for districts, and for associations. They operate with deposits to the amount of about 1,200,000,000 florins, while their own property, which is represented by the reserve funds, is more than 70,000,000 florins, or 6 per cent. of the dues to depositors. The insolvency of one of those savings banks is the greatest rarity.

In Hungary there is likewise a pretty brisk banking business going on at present. It should, however, be observed that the savings banks are for the greater part people's banks, with predilection for transacting bill business, whereby the security of the depositors' money is not so well guarded as it is with the savings banks of Austria. Numerous failures, called forth by the incautious granting of credit on the part of managers, have been the cause of great mischief in several of the respective localities.

In Buda-Pesth there are 15 savings banks pursuing every branch of banking transactions. The most prominent of these are the Ungarische Creditbank (Hungarian Crediting Bank), the Ungarische Bodencreditinstitut (Hungarian Institute for Credit on Real Estate), the Pester Commercial Bank (Commercial Bank at Pesth). The total capital stock invested in these 15 banks, which (according to a planned increase of capital) is about 80,000,000 florins, has, during these latter years, returned to shareholders a dividend of from 6 to 20 per cent.

In Hungarian provinces there are 148 banking associations and people's banks, besides 460 savings banks. The greater part of the latter are small banks of the people on shares, and there are some among their number the joint stock of which does not amount to more than the sum of 20,000 florins (about $8,000). But, in spite of the high rate of interest charged to credit-takers by these small provincial institutions of Hungary, they are, nevertheless, of uncommon importance to the traffic of that country, so poor in funds; and, by their promptness in granting credit, they are enabled to exercise a most beneficial influence, both on commerce and holders of small or middling-sized estates.

The total capital stock invested and divided in shares of the provincial banking institutions and savings banks is 60,000,000 florins; the sums due to depositors reach ten times that amount. The dividends paid by some of these banks are as high as 50 per cent. per annum. While, to be sure, some of them yield no dividend at all, the bulk of them pay to shareholders an average premium of 12 per cent.

The most popular institution for money transactions, and one eminently useful, is that of the Postsparkasse (Post-office Savings Bank). That institution, called into life in 1882, was principally designed to encourage a desire for economy among the population, and especially to offer the advantages of a savings bank to those parts of the country where there was no such institution established. At the same time with the Post-office Savings Bank the

so-called Anweisungs-Verkehr (for clearing purposes) was organized, whose business so increased that it became necessary to separate it from the Post-office Savings Bank and to conduct it by special regulations sanctioned by the Austrian Parliament. By means of the Anweisungs-Verkehr a person holding an account is enabled to receive or make payments at any post-office throughout Austria, and at an exceedingly small charge of dues. For moneys deposited in the Post-office Savings Bank the rate of 3 per cent. is allowed; for those in the Anweisungs-Verkehr (clearing) the highest is 2 per cent.

From the sixth annual statement furnished the minister of commerce by the postal savings bank bureau, for the year 1889, the following passage is extracted:

As is seen from this statement [for 1889], the business transactions of this bureau have been prosperous during this year, as well as in the past, and the success of the savings bank and clearing transactions surpasses by far that of the previous year. The savings-bank business, which is in a flourishing condition, has been increased again by numerous new depositors from the less wealthy classes, and the capital left with the savings bank has this year experienced a greater percentage of increase than was reached by any of the preceding years. This success justifies the anticipation of a still more favorable future.

The check and clearing institution met with a brisk demand on the part of all classes of the population during the past year. The check transactions of 1889 exceeded the amount of 1,500,000,000 florins. The clearing transactions during December, 1889, represented 29.2 per cent of the total of transactions. The results of 1889 show an increase of 25 per cent. as compared with those of 1888.

The following figures show the number and state of depositors and their deposits in the Postal Savings Bank and check and clearing department:

Table showing the number of depositors and postal branch offices of the Postal Savings Bank of Austria (1884–'89).

Description.	1884.	1885.	1886.	1887.	1888.	1889.
	Number.	*Number.*	*Number.*	*Number.*	*Number.*	*Number.*
Postal branch offices	4,118	4,172	4,268	4,356	4,455	4,548
New depositors	144,406	127,542	126,600	121,141	124,007	133,729
Depositors withdrawn	68,706	62,028	65,383	65,936	65,065	67,883
Depositors:						
Savings department	426,233	487,390	544,931	597,708	655,335	719,341
Check department	2,520	6,877	10,553	12,981	14,296	16,046
Total	428,753	494,267	555,484	610,689	669,631	735,387
Increase of depositors:						
Savings department	73,347	61,157	57,541	52,777	57,627	64,096
Check department	2,353	4,357	3,676	2,428	1,315	1,750
Total	75,700	65,514	61,217	55,205	58,942	65,756
Increase of members of the clearing department	1,283	3,450	2,541	1,484	1,078	1,189

Table showing the financial condition of the Postal Savings Bank of Austria (1884-'89).

Description.	1884.	1885.	1886.	1887.	1888.	1889.
Amount of deposit during the year:	*Florins.*	*Florins.*	*Florins.*	*Florins.*	*Florins.*	*Florins.*
Savings department	10,434,619	14,446,207	15,706,987	15,283,133	16,016,701	18,625,680
Check department	46,223,529	263,853,688	478,691,711	611,047,898	644,072,812	754,942,445
Total	56,658,148	278,299,895	494,398,698	626,331,031	660,089,513	773,568,125
Moneys withdrawn during the year:						
Savings department	8,254,727	11,948,457	13,634,031	13,322,970	13,731,443	15,715,911
Check department	41,234,429	252,260,084	466,807,297	611,693,910	643,718,457	750,898,892
Total	49,489,156	264,208,541	480,441,328	625,016,880	657,449,900	766,614,803
Due to depositors:						
Savings department	6,181,633	8,679,383	10,752,339	12,712,502	14,997,760	17,907,529
Check department	5,098,091	16,691,695	28,576,109	27,930,097	28,284,452	32,328,004
Total	11,279,724	25,371,078	39,328,448	40,642,599	43,282,212	50,235,533
Average due:						
One savings-bank book-holder	14	18	20	21	23	25
One check-book holder	2,023	2,477	2,708	2,152	1,978	2,015
One depositor	26	51	71	67	65	68
Increase of net deposits:						
Savings department	2,179,892	2,497,750	2,072,956	1,960,163	2,285,258	2,909,769
Check department	4,989,100	11,593,604	11,884,414	646,012	354,355	4,043,553
Total	7,168,992	14,091,354	13,957,370	1,314,151	2,639,613	6,953,322

NOTE.—The clearing transactions were: In 1884, 1,620,102 florins; 1885, 40,271,880 florins; 1886, 102,185,786 florins; 1887, 150,479,085 florins; 1888, 177,846,958 florins; 1889, 216,683,155 florins.

Of every 1,000 inhabitants of Austria there were 31 depositors at the end of the year 1889 and 29 book-holders in 1888. The report of the savings banks in Austria for 1889 shows that in 300 savings banks by which an annual statement has been published 312,000,000 florins were deposited during 1889 and 279,500,000 florins withdrawn, being equal to an increase of 32,500,000 florins. The interest added to the capital amounted to 39,000,000 florins, so that the actual increase of capital is more than 71,000,000 florins. At the end of 1889 the total capital deposited in Austrian savings banks amounted to from 1,200,000,000 to 1,300,000,000 florins.

AUSTRO-HUNGARIAN CURRENCY.

A highly important financial step is now about being taken concerning the question of regulating the standard money, which was promulgated in the month of December of last year, and which is earnestly taken into consideration by the Governments of both Austria and Hungary. A short account of the standard money of this realm and of the fluctuation of legal-tender money is well worthy of being recorded.

The Austro-Hungarian Government, having to grapple with difficulties brought on by the outbreaks of 1848, decreed the compulsory acceptance as a legal tender of the bank notes issued by the National Bank, the only bank

of issue for paper money, and which currency had hitherto been redeemable in silver. The shocks of the revolutionary year and the reactionary epoch succeeding resulted in depressing the value of that paper currency to a discount of nearly 70 per cent. In the endeavor to prevent any further depression the buying or selling of silver or bills at the stock exchange of Vienna was interdicted. This prohibition could scarcely be expected to bring about the desired effect, either of lessening public distrust or of removing the lack of specie. In this dilemma the guidance of the finances of the State was committed by the Government to the hands of a German merchant from Trieste—the well-known Baron Bruck—and the mere fact of that appointment seemed to strengthen public confidence. The first step of that minister of finance was to regulate the household affairs of the State. Instead of the standard money then existing of 20 florins equal to 1 zollpfund, he adopted that of 21 florins equal to 1 zollpfund, which corresponded better to the standard money of Germany. By this change silver, removed hitherto from circulation, was brought to light again; and on November 1, 1857, 2 years after the appointment of Baron Bruck, the premium for silver had disappeared entirely.

The French-Italian war in 1859 caused another discount of paper money, which, after Mr. Bruck's retirement from office, was—though in a less able manner—removed by his successor. Towards the end of 1865 the premium paid for silver was for months but 1½ to 1 per cent.

In the spring of 1866 paper currency was affected again by the gathering clouds of the Austro-Prussian war, depressing its value by 60 per cent. at the time of the outbreak of the war. The luxuriant crops of the autumn succeeding the war brought down the discount to 9 per cent., to fluctuate for a number of years afterwards between 9 and 18 per cent.

Then the Franco-German war made itself felt by raising the discount again to 40 per cent. By the establishing of gold as the standard by several great countries and by the depreciation of the price of silver in the London market the critical situation of the Austro-Hungarian currency became still more wretched, as it thereby was turned into an object for two discounts, viz, of one discount for silver and another for gold. The sinking of the price for silver, steadily progressing, led to the cessation of the coining of silver on private accounts, and the state of the circulating medium became as follows: The bank note for 1 florin redeemable in silver, at the London quotation of 117.50 florins per £10, is worth 0.863 florin in gold, whilst the value of the silver coin of 1 florin, expressed in gold, is about 8 per cent. less than that which is represented by its substitute, the paper florin; or, in other words, for 100 florins in bank notes may be had a sum in gold 8 per cent. greater than the sum in gold that can bought for 100 florins in silver coin.

However, this circumstance alone would scarcely have formed a sufficient cause for the Government to take into consideration the means of establishing a currency which would not vary in value or be subject to any fluctuation of price, had it not rather been from the motive of turning to account

the apparently peaceable prospects of the present by converting the public debt in the form of "Staatsnoten" (bank notes for 1, 5, and 50 florins issued by the Austro-Hungarian National Bank, but redeemable by the State) of more than 380,000,000 florins into a consolidated debt; further, to transform the silver currency of changeable value into one of unchangeable value; and, lastly, to reduce the unit of coin—all of which objects are to be obtained in the following manner:

(1) By the taking up of a loan for the purpose of calling in the Staatsnoten and of procuring means sufficient to supplant the present currency by a circulating medium of gold.

(2) The satisfying of all obligations due by the State and by the Austro-Hungarian National Bank, and of all private obligations the payments of which have not been expressly stipulated to be effected in gold, in such a manner that for each florin of the present silver or paper currency there is to be paid 0.80 florin in gold.

(3) The unit of coin is to be like that of the French franc.

These propositions, especially the second, were prompted by the Hungarian Government, actuated by the assumption that the fixation of a course at 125 per cent., which answers to the conversion as mentioned above, would be greatly subservient to the export of grain.

Of late a representative of the Hungarian Government sojourned at Vienna in order to confer with the Austrian Government on the *modus operandi*. Select committees in both Austria and Hungary, consisting of a number of prominent merchants, manufacturers, landowners, and financiers, are to be appointed for joint deliberations by both committees and to give their opinions on the matter of regulating the standard currency.

Since writing the above the former minister of finance has vacated his office and has been succeeded by Dr. Steinbach, the new minister of finance, and more lively negotiations are at present being carried on between the Governments of Austria and Hungary in regard to the regulation of the currency question. Most of the experienced financiers, however, are of opinion that 2 years at least must elapse before the reform can be effected, and provided that the international situation will not change in such a way as to prevent it altogether, a fate which befell several previous efforts in that direction.

AUSTRO-HUNGARIAN RAILWAYS.

The construction of railways has been greatly stimulated in Austria-Hungary by a regulation on the part of the Government guarantying the payment of interest on, and the amortization of, the capital stock invested in railroads; in general, the former is guarantied by the Government with 5 per cent., the latter with one-fifth of 1 per cent. If the proceeds from the working of a railroad are not sufficient for that purpose, the deficit is advanced by the State, and the sum thus advanced is made apparent in the State's budget under the head of "subvention." With railroad lines thus subventioned the legal right is secured to the State of entering into possession of the line, or of working

it, before the expiration of the usual term of 90 years, or, as the technical term expresses it, to "verstaatlichen" the line.

The total length of lines in Austria-Hungary at the end of November, 1890, was 26,268 kilometres, against 25,598 kilometres at the same period in 1889. The number of passengers conveyed from January to November, 1890, was 85,660,353, showing an increase of 16,476,496 passengers* as compared with the same period of 1889.

The following table gives the number of passengers, with the increase, for each month of 1889 and 1890:

Month.	Number of passengers.		Increase.	
	1889.	1890.	Number.	Per cent.
January	4,042,073	4,877,921	835,848	20.7
February	3,679,659	4,589,563	909,904	24.7
March	4,460,590	5,728,555	1,267,965	28.4
April	5,473,797	6,898,879	1,425,082	26
May	6,533,233	8,476,440	1,943,207	29.7
June	7,821,550	8,622,670	801,120	10.5
July	7,665,127	10,251,342	2,386,215	33.7
August	8,713,057	11,288,322	2,575,265	29.5
September	8,196,545	9,676,006	1,479,461	18
October	6,674,225	8,115,837	1,439,612	21.6
November	5,635,001	7,134,848	1,499,847	26.6

This considerable increase of the passenger traffic is due to the recent introduction of the so-called zone tariff on several lines. That tariff is mentioned more closely under the heads of "railways in Hungary," and "first year's working of the zone tariff;" and, as that tariff must gain ground with those lines of Austria-Hungary which have not yet adopted it, it is to be expected that there will be a still greater increase of traffic.

It is worthy of mention to observe the difference in the working of the zone tariff as it has been differently applied to the railroads of Austria and Hungary, for, whilst the zone tariff as introduced into the lines of the former is principally in favor of the neighboring traffic, that of the latter offers the greater advantages to the greater distance; and the results of the traffic during the 11 months of 1889–'90 show that for each increase of a passenger on the lines of Austria there is an increase of receipts of only 0.22 kreutzers, against an increase of 17½ kreutzers for each increase of a passenger on the lines of Hungary.

RAILWAYS OF AUSTRIA.

The total length of the working lines at the time of writing this is 17,960 kilometres; the capital invested about 2,835,000,000 florins.

These lines are partly the property of the State, or under its administration, and hence called "Staatsbahnen;" and the rest owned and worked by stock companies and styled "Privatbahnen." They will be separately treated under the heads of "Staatsbahnen," "Privatbahnen," and "Lokalbahnen."

*Austria, 8,281,882; Hungary, 6,542,576; common to both realms, 1,652,038; total, 16,476,496.

*Staatsbahnen.**—Of late years the Austrian Government has built several important lines of railroad at the cost of the State.

The whole length of lines owned by the Austrian State or worked by the same amounts to 5,960 kilometres and is divided into four groups: (1) western group, including the Western, Rudolf, Franz Josef, Arlberg, etc., railroads with a total length of 3,975 kilometres; (2) Moravian Transversal, Moravian Grenz (frontier), and the Galician railways, 1,715 kilometres; (3) Istrian railroads, 165 kilometres; (4) Dalmatian railroads, 105 kilometres; total, 5,960 kilometres. The working of these lines is under the management of the general direction of the Austrian State railways. The rolling stock consists of about 1,080 locomotives, 900 tenders, 2,500 passenger cars, 700 mail cars, and 18,000 freight cars. The capital stock invested for the construction or the acquisition of the lines and for subsequent investments amounts to about 800,000,000 florins, or about 145,000 florins per kilometre of road operated. According to the reports of 1887 and 1888, there was a surplus earning of about 2.5 per cent. on the capital stock invested.

The general direction is assisted by the "Eisenbahnrath," which is a consultative committee whose members are chosen from the classes of the most influential real-estate holders, merchants, manufacturers, and agriculturists, who are nominated by the minister of commerce and proposed to the Emperor for appointment. Numerous beneficial railroad reforms owe their origin to that consultative body.

Privateisenbahnen.†—The private railroads of Austria have a length of 11,000 kilometres; the capital stock invested is 2,000,000,000 florins; the principal lines are the Staatseisenbahn (State Railroad), Südbahn (Southern Railroad), Nordwestbahn (Northwestern Railroad), and the Galician Karl Ludwigsbahn. In the total length of lines before mentioned there are included 5,925 kilometres (capital invested 1,150,000,000 florins) of railroad line that extends both over Austria and Hungary.

The results from the different railroad shares vary greatly. While several railroad companies (mostly those of less significance, as the Moravian and Prague-Dux Railroads) work their lines with a deficit in their returns and have not paid any interest to the shareholders for a number of years, the Aussegg-Teplitz Railroad, on the other hand, yields a premium of 20 per cent. and over. In general, it may be said that, with the exception of some lines, as, for instance, the Südbahn, the proceeds from solid Austrian railway shares are about from 6 to 8 per cent.

Lokalbahnen.‡—Of such lines there is at present in Austria a total length of about 1,000 kilometres, established at the cost of nearly 33,500,000 florins. The Government, however, is patronizing such undertakings by grants of money, by exemption from taxes, etc., and by every advance compatible with the security of railway traffic, though the construction of such lines is chiefly owing to the willingness of the parties adjacent.

* Railroads owned by the Government or under its administration.

† Private railroads or railroads owned and operated by stock companies.

‡ Local railroads.

RAILWAYS OF HUNGARY.

The total length of the Hungarian railways is about 8,000 kilometres; the total capital invested has not been obtainable here. The principal feature, however, connected with these lines, and one deserving of greatest attention, is the cheap zone tariff, as introduced on the Hungarian State railways by M. Barosz, the Hungarian minister of commerce. The phenomenal success of that measure is visible from the following statement:

State railways.—The railroads of Hungary have a length of about 5,500 kilometres and a rolling stock of 750 locomotives, 650 tenders, 2,050 passenger cars, and 16,500 freight cars. The seat of the general direction is at Buda-Pesth. As to the cost for acquisition, etc., there are no official data at hand.

Zone passenger traffic.—On the 1st of August, 1889, the "Zonentarif," a wholly new system of calculating and determining the price for passengers' fare, etc., was established on all the lines owned or managed by the Hungarian Government, and the system has thus far proved so advantageous, both to the traveling public and to the profitable working of the lines, that soon after similar measures were adopted in Austria and in part of Germany; and there is little doubt that the example thus set will be followed by most of the continental countries.

The Zonentarif, as introduced in Hungary, divides traveling on main lines into fourteen principal classes, and that on the branch lines into two classes; these classes are called zones, and for one or more of these zones tickets are issued that entitle a passenger to travel from the starting place to the end of the zone or to any point within that zone.

The following table shows the divisions into zones and the price for passage:

Number of zone.	Description.	Local trains.			Fast trains.		
		First class.	Second class.	Third class.	First class.	Second class.	Third class.
Short lines.		*Florins.*	*Florins.*	*Florins.*	*Florins.*	*Florins.*	*Florins.*
1	First station	0.30	0.15	0.10	.....	.....	.....
2	Second station	.40	.22	.15	.....	.....	.....
Main lines.							
1	1 to 25 kilometres	.50	.40	.25	0.60	0.50	0.30
2	26 to 40 kilometres	1.00	.80	.50	1.20	1.00	.60
3	41 to 55 kilometres	1.50	1.20	.75	1.80	1.50	.90
4	56 to 70 kilometres	2.00	1.60	1.00	2.40	2.00	1.20
5	71 to 85 kilometres	2.50	2.00	1.25	3.00	2.50	1.50
6	86 to 100 kilometres	3.00	2.40	1.50	3.60	3.00	1.80
7	101 to 115 kilometres	3.50	2 80	1.75	4.20	3.50	2.10
8	116 to 130 kilometres	4.00	3.20	2.00	4.80	4.00	2.40
9	131 to 145 kilometres	4.50	3.60	2.25	5.40	4.50	2.70
10	146 to 160 kilometres	5.00	4.00	2.50	6.00	5.00	3.00
11	161 to 175 kilometres	5.50	4.40	2.75	6.60	5.50	3.30
12	176 to 200 kilometres	6.00	4.80	3.00	7.20	6.00	3.60
13	201 to 225 kilometres	7.00	5.30	3.50	8.40	6.50	4.20
14	226 kilometres and over	8.00	5.80	4.00	9.60	7.00	4.80

From this table it will be seen that any distance of more than 225 kilometres of railroad line belongs to zone 14; hence, with a ticket purchased for that zone, a traveler may journey from Buda-Pesth to Fiume, a distance of 608 kilometres, or to Predeal, a distance of 761 kilometres, for a sum varying from 4 to 9.60 florins, according to the kind of train and class of car.

On a similar plan the forwarding of passengers' baggage has been divided into three classes or zones; but free weight of baggage is granted no more, the former allowance of 50 pounds of free weight of baggage for each passenger ticket having been abolished.

The charges for the forwarding of passengers' baggage are as follows:

Distance.	1 to 50 kilos.	51 to 100 kilos.	101 kilos. and over.
	Florins.	*Florins.*	*Florins.*
1 to 55 kilometres	0.25	0.50	1.00
56 to 100 kilometres	.50	1.00	2.00
101 kilometres and over	1.00	2.00	4.00

As a starting point for calculating the distance, Buda-Pesth was fixed upon; so that distances not starting from Buda-Pesth do not touch upon that city. They fall within one zone, requiring only one zone ticket; but, if Buda-Pesth must be passed, two tickets are required—that is to say, if a passenger wishes to start from any given point to any other point leading through and beyond Buda-Pesth, he is obliged to get one ticket in order to reach Buda-Pesth and another to take him from that city to his place of destination.

The introduction of this innovation was not only violently combated, but even greatly ridiculed by men who were considered competent judges on all railroad matters. The new system, however, has been tried and the results have proved highly satisfactory.

Besides the manifold advantages accruing to the management of railroads from this system of unification, its cheapness of traveling is made evident from the following comparison of various railroad lines:

Table showing the prices of first-class tickets for a distance of 70 kilometres.

Railway lines.	Fast trains.	Local trains.
	Florins.	*Florins.*
Austro-Hungarian Staatsbahn	3.37	2.71
Branch lines		3.21
Südbahn (Southern Railroad)	5.42	4.54
Hungarian Government Railroad (fourth zone)	2.40	2.00

The ratio in the difference of prices is still increasing as the distance increases, and it is greatest in traveling over a distance of more than 225 kilometres; and, in spite of, or rather, to express it more correctly, by the cause of traveling becoming thus greatly cheapened, the surplus receipts from passengers' fares during the month of November, 1889, exceeded that of the like period of the preceding year by nearly 20 per cent.

Although at the time of the introduction of the zone tariff the number of passengers forwarded by the 4,990 kilometres of Hungarian State railroad remained considerably behind the number of passengers forwarded during the same period of the preceding year—the results of that preceding year being considered as very unfavorable—the number forwarded on the lines was increasing at such a rate that, according to official statistics reaching to the end of November, 1889, there were sold during that month of November 947,669 passenger tickets yielding a receipt of 710,298 florins, while for November of the preceding year (1888) 503,649 passenger tickets were sold with the receipt of 595,133 florins, thus showing for November, 1889, an increase of 444,020 passengers and of 115,165 florins.

As a consequence of this favorable turn, not only the shortcomings were made up that had occurred at the commencement of the working of the zone tariff in the month of August, but the receipts from passenger tickets—which were 7,683,641 florins in 1888 and 8,235,215 florins in 1889—show an increase of 551,574 florins. The increase in the number of passengers is about 80 per cent.

The following table shows the amount of passengers' baggage forwarded and the proceeds resulting therefrom for the period from August 1, 1889 (day of introduction of the zone tariff), until July 31, 1890, as compared with the same period for 1888-'89:

Year.	Passengers.	Baggage.	Receipts.		
			Passenger.	Baggage.	Total.
	Number.	*Pieces.*	*Florins.*	*Florins.*	*Florins.*
1889-'90	*13,060,751	603,060	10,627,676	558,645	11,186,321
1888-'89	5,186,227	465,759	8,777,179	361,536	9,138,715
Increase	7,874,524	137,201	1,850,497	197,109	2,047,606

*Short distances, 7,385,131; long distances, 5,675,620.

What is still more striking is that this unexpectedly great success of the zone tariff is not confined to the year immediately following the introduction of that innovation; but the period from August 1 to September 20, 1890, shows another increase of passengers to the number of 475,578 and an increase of receipts of 56,078 florins compared with those of the same period of 1889, thus showing that, in spite of the sudden and mighty rise of traffic caused by the first year's working of the zone tariff, the increase is still continuing.

Zone freight traffic.—For freight traffic a similar radical reform has been worked out by the Hungarian minister of commerce. By this ordinance three zones of distances are established for the forwarding of freight: (1) from 1 to 200 kilometres, (2) 201 to 400 kilometres, (3) 401 kilometres and over. For each of these zones a uniform tariff is fixed, which is by 33 per cent. less than the former average tariff for the conveyance of goods.

In view of the greater competition of steam shipping on the Danube, the tariff for goods conveyed from Buda-Pesth to Bruck is even lower than the rate established for the second zone.

Private railways.—The total length of private lines in Hungary is about 2,000 kilometres; the capital invested, 150,000,000 florins. The lines stretching over Hungary and Austria have been mentioned under the head of private railroads in Austria.

The returns from Hungarian railway shares are somewhat lower than from those of Austria. The Hungarian Government, however, is strongly pushing to take possession of the private railroads—having already *verstaatlicht* (acquired for the State) last year the Buda-Pesth-Fünfkirchen Railroad—and zealously carrying on negotiations for the acquisition of several other private railways.

Local lines.—The local Hungarian lines have a length of about 506 kilometres, costing 15,000,000 florins. The construction of these lines chiefly depends on the good will of the parties adjacent, although the Government is patronizing such undertakings in every possible manner.

MERCANTILE MARINE.

The commercial sea navigation of Austria-Hungary is restricted chiefly to the Austrian seaport of Trieste and to Fiume, the Hungarian rival of the former. Both are situated on the Adriatic Sea, and their navigation and commerce, representing the principal mercantile transactions by sea, are treated separately in this report.

The Austro-Hungarian mercantile marine is represented by the following stock companies:

(1) The Austro-Hungarian Lloyd, the most prominent undertaking in Austria-Hungary for sea navigation and ranking among the ten largest navigation companies of the world, was founded in 1833. It runs regular lines, starting from Trieste, to the following seaports: Europe—Fiume, Cattaro, Corfu, Prevesta, Spalato and Metkovich, Contantinople, Salonica, Cyprus; Asia—Smyrna, Beirut, Bombay, Calcutta, Hongkong; Africa—Alexandria; and, as occasion demands, to the ports of Brazil. The company possesses eighty-seven ironclads of about 2,500 indicated horse-power each and of about 130,000 tons. The total capital stock invested is 21,815,000 florins, yielding, until recently, from 4 to 6 per cent. The year 1889 closed with a deficit of 411,000 florins; the deficit for 1890 is estimated at 600,000 florins. Between the Austro-Hungarian Government and the company a convention has been agreed on stipulating the carrying of mails, etc., for which the Government pays the sum of 1,300,000 florins to the company. That compact, not being very favorable to the latter, is about running out, and will probably not be renewed with the Government of Austria-Hungary; but negotiations are at present being carried on between the State authorities of Austria and the company, tending to grant to the latter a larger subvention than hitherto allowed, but permitting the former a greater influence in the management of the company.

(2) The Hungarian sea navigation stock company Adria, at Fiume, with a capital stock invested of 1,000,000 florins, and receiving an annual subvention from the Hungarian Government. In the commencement it directed its activity chiefly to the ports of England, Scotland, and France; but of late its vessels also visit the north of Africa, Spain, Portugal, and Brazil.

(3) Several small undertakings, operating with a sum of only 60,000 to 80,000 florins, chiefly for traffic to Cette, Marseilles, Venice, and the inland coasting places.

Table showing the sea navigation of Austria-Hungary during the years 1884–'88.

Description.	1884.		1885.		1886.	
	No.	Tons.	No.	Tons.	No.	Tons.
Steamers:						
Ocean	55	61,500	54	63,552	58	71,536
Coast—						
Large	34	11,984	34	12,719	34	12,628
Small	29	1,148	32	1,301	36	1,494
Total	118	74,632	120	77,572	128	85,685
Sailing vessels:						
Ocean	244	133,605	214	121,226	193	109,838
Coast—						
Large	61	6,386	56	5,896	54	6,326
Small	1,549	21,349	1,525	21,295	1,551	21,809
Fishing smacks	2,433	6,716	2,203	5,698	2,480	6,256
Barks and lighters	4,302	10,839	4,770	10,922	4,846	10,896
Total	8,589	178,895	8,768	165,037	9,124	155,125
New ships built	175	10,005	175	4,702	160	10,028
Ships renovated and repaired	657	157,611	489	158,683	480	121,237

Description.	1887.		1888.	
	No.	Tons.	No.	Tons.
Steamers:				
Ocean	58	71,356	58	71,285
Coast—				
Large	34	12,872	29	11,249
Small	39	1,724	48	2,130
Total	131	85,952	135	84,664
Sailing vessels:				
Ocean	161	91,536	127	73,442
Coast—				
Large	53	6,490	49	6,426
Small	1,526	21,760	1,511	21,607
Fishing smacks	2,493	6,275	2,474	6,271
Barks and lighters	4,871	10,964	5,130	13,495
Total	9,104	137,025	9,291	121,141
New ships built	204	1,901	200	2,602
Ships renovated and repaired	605	141,526	682	126,434

Table showing arrivals and departures of vessels in the ports of Austria in the years 1884–'88.

ARRIVALS.

Year.	Loaded.		In ballast.		Unserviceable.		Total.	
	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.
1884	36,922	5,060,466	9,061	730,718	12,322	1,045,599	58,305	6,836,783
1885	37,784	5,188,026	9,300	756,798	12,282	1,040,888	59,366	6,985,712
1886	40,166	5,233,218	8,662	683,764	14,016	1,018,158	62,844	6,935,140
1887	47,120	6,423,447	10,451	783,503	12,023	859,478	69,594	8,066,428
1888	49,233	6,832,205	9,409	713,450	10,107	818,871	68,749	8,364,526

DEPARTURES.

1884	35,944	4,694,209	10,000	1,120,994	12,305	1,035,553	58,249	6,850,756
1885	37,259	4,896,673	9,697	1,055,419	12,242	1,022,368	59,198	6,974,460
1886	38,938	4,991,870	9,708	907,740	13,993	1,017,432	62,639	6,917,042
1887	46,485	6,096,490	11,118	1,124,264	12,017	854,811	69,620	8,075,565
1888	49,054	6,625,501	9,468	911,381	10,112	820,716	68,634	8,357,598

Of the above total the proportion of steamers was as follows:

Year.	Arrivals.		Departures.	
	No.	Tons.	No.	Tons.
1884	28,457	5,789,702	28,453	5,798,173
1885	30,576	5,934,147	30,544	5,931,108
1886	33,792	5,917,818	33,732	5,902,787
1887	40,915	7,044,050	40,924	7,046,003
1888	41,196	7,405,901	41,164	7,402,808

Table showing the tonnage of arrivals and departures of vessels in Austrian ports by flag from 1884 to 1888.

ARRIVALS.

Flag.	1884.	1885.	1886.	1887.	1888.
	Tons.	*Tons.*	*Tons.*	*Tons.*	*Tons.*
Austro-Hungarian	5,967,039	6,041,307	6,028,873	7,033,478	7,383,125
Italian	467,253	514,901	511,434	570,606	561,195
British	255,744	277,410	274,076	319,754	276,902
Grecian	60,805	51,957	42,905	60,161	58,337
German	34,868	47,720	29,105	38,803	32,618
Turkish	10,272	8,124	7,716	13,731	12,587
Other	40,801	44,293	41,031	29,895	39,762
Total	6,836,783	6,985,712	6,935,140	8,066,428	8,364,526

DEPARTURES.

Austro-Hungarian	5,970,048	6,022,602	6,012,940	7,037,660	7,374,018
Italian	468,124	515,159	511,611	575,759	561,291
British	260,759	279,713	271,729	317,117	278,109
Grecian	64,318	55,499	41,844	62,719	60,142
German	36,118	49,886	27,778	38,259	33,231
Turkish	11,217	8,951	7,519	14,360	12,329
Other	40,172	42,650	43,621	29,691	38,478
Total	6,850,756	6,974,460	6,917,042	8,075,565	8,357,598

Table showing the navigation, by countries, carried on at the ports of Austria during the years 1884-'88.

ARRIVALS.

Countries.	1884.	1885.	1886.	1887.	1888.
	Tons.	*Tons.*	*Tons.*	*Tons.*	*Tons.*
Austria-Hungary	5,184,817	5,227,896	5,479,209	6,376,810	6,673,985
Italy	430,690	542,792	418,081	579,822	548,916
Turkey	471,498	508,599	360,343	382,442	339,640
Greece	222,119	211,612	188,763	169,683	264,224
England	190,084	174,755	174,687	202,396	186,339
Egypt	68,985	68,125	68,534	83,545	79,559
France	70,592	66,705	43,648	61,179	58,474
East India	48,793	49,936	50,343	56,361	53,594
Russia	15,023	21,115	16,097	34,898	52,384
Other	134,182	114,117	115,434	119,292	107,411
Total	6,836,783	6,985,712	6,935,140	8,066,428	8,364,526

DEPARTURES.

Austria-Hungary	5,244,124	5,240,953	5,454,200	6,296,210	6,596,017
Italy	401,103	507,651	436,221	622,940	591,966
Turkey	436,242	473,269	371,819	444,402	368,533
Greece	254,271	244,187	205,231	179,118	276,303
England	155,993	147,871	117,554	130,356	125,216
Egypt	72,100	83,445	88,130	100,914	87,440
France	110,382	86,680	65,613	62,825	92,727
East India	37,133	34,165	18,123	38,817	26,713
Russia	19,092	17,527	19,771	49,484	56,811
Other	120,316	138,712	140,380	150,499	135,872
Total	6,850,756	6,974,460	6,917,042	8,075,565	8,357,598

Table showing the value of goods imported to and exported from the ports of Austria during the years 1884-'88.

IMPORTS.

Description.	1884.	1885.	1886.	1887.	1888.
	Florins.	*Florins.*	*Florins.*	*Florins.*	*Florins.*
Total value	228,949,765	206,295,162	219,614,042	238,918,692	230,872,306
Textile goods and yarns	51,910,971	38,517,637	44,333,992	49,268,365	47,795,813
Groceries	36,888,082	35,625,620	43,345,018	44,248,690	39,126,796
Tropical fruit	12,140,392	13,140,729	14,322,219	16,743,684	20,352,084
Animal products	14,498,869	14,842,448	14,804,200	17,524,384	18,489,485
Grain, flour, and rice	14,991,870	15,000,456	13,303,492	14,814,361	14,732,642
Dyes and tanning stuff	12,145,648	11,771,927	12,093,197	10,930,850	12,957,450
Beverages	10,429,275	11,454,995	12,712,002	13,946,122	12,556,707

EXPORTS.

Total value	204,383,577	200,753,132	199,115,802	211,749,960	196,119,484
Textile goods and yarns	45,152,121	42,442,692	36,345,650	42,710,195	42,202,364
Beverages	23,531,107	22,969,660	24,408,529	25,862,380	25,198,388
Wood and coal	13,547,179	15,975,977	14,089,558	16,634,074	16,748,175
Grain and flour	13,700,929	15,249,190	16,364,643	14,262,405	14,329,092
Sugar	20,033,420	17,089,396	15,172,322	14,014,769	10,251,853
Clothing and linen goods	937,031	2,014,804	8,162,687	15,379,125	6,166,456
Paper and paper goods	4,751,273	4,579,296	5,230,438	5,576,248	6,201,240

ARRIVALS AND DEPARTURES OF VESSELS AT TRIESTE.

The following is an official statement of the arrivals and departures of vessels and their tonnage at the port of Trieste for the years 1889 and 1890:

Description.	1889.		1890.	
	No.	Tons.	No.	Tons.
Arrivals	8,213	1,447,940	7,873	1,471,464
Departures	8,192	1,441,250	7,856	1,457,174

Table showing the arrivals and departures from and to the United States in 1889 and 1890.

Description.	1889.		1890.	
	No.	Tons.	No.	Tons.
Arrivals	13	11,024	36	30,042
Departures	19	38,588	20	44,500

None of these vessels, however, either arrived or departed under the American flag.

RIVER NAVIGATION.

The Donau Dampfschiff fahrts-Gesellschaft (Danube Steamboat Company) is possessed of the exclusive right of steam navigation on the Austro-Hungarian part of the River Danube and its tributaries. The company in 1888 possessed 190 steamships of 17,123 horse-power and 749 iron tows; the capital stock invested is 46,153,000 florins (shares and preference shares), with a former return of 4.6 per cent.

The steamers navigate the River Danube down to the Soolina's mouth, and also its tributaries, as the Save and Drave. On the lower part of the Danube the company has to contend against some rival undertakings, as the Russian enterprise of Gagarin, which, from political reasons, is subventioned by the Russian Government; but nearly all those undertakings have turned out to be entirely unprofitable.

The privilege granting the monopoly of the exclusive right of steam navigation on the Austro-Hungarian Danube is about expiring, and the company is endeavoring to get that privilege renewed, to which, however, the Hungarian Government will only agree on certain conditions, the chief of which are dualism of the management now localized in Vienna and greater concessions to the Hungarian Government on the question of tariffing. In Hungary the privilege of the company was canceled, according to article 14 of 1873, and by the same law the Hungarian Government's guaranty of the payment of interest was stopped. Of late some differences of opinion have arisen between the Government of Hungary and the steamship company, the former desiring to gain a more direct influence in regulating the politics and prices of tariffing and insisting on the company establishing

another independent administration at Buda-Pesth. These points have not been settled as yet, but a compromise is likely to be brought about by the intercession of the most influential and principal shareholders, although at present the Government seems not inclined to grant any concessions; therefore, the precariousness of the economical state of the Donau Dampfschifffahrts-Gesellschaft, which has not paid any premium for 3 years, is becoming still more uncertain, to the great detriment of the company's shareholders.

The former manager of the company, who, perhaps, maintained too firmly the interests of the company against the claims of the Hungarian Government had to make room for another director more conciliating; but the negotiations between the Government and the company have not yet reached an end.

The Österreichische Nordwest Dampfschifffahrts-Gesellschaft (Austrian Northwestern Steamship Company) for navigation on the River Elbe had, in 1888, 38 steamboats and 166 tows of 52,931 tons. Other data have not been obtainable.

AUSTRIAN POSTAL, TELEGRAPH, AND TELEPHONE STATISTICS.

The following tables give the latest statistical data, as published by the official report, respecting the postal, telegraphic, and telephone service:

Table showing the number of post and telegraph offices, their receipts and expenditures, etc., during the years 1884–'88.

Description.	1884.	1885.	1886.	1887.	1888.
Post-offices:					
Ärarische*.....number...	260	275	292	312	322
Nichtärarische†.....do....	3,931	3,988	4,055	4,122	4,232
Total.....do.....	4,191	4,263	4,347	4,434	4,554
State telegraph:					
Length of lines.....kilometres...	24,086	24,731	25,070	25,706	26,238
Length of wire.....do.....	65,308	66,492	67,450	69,510	71,742
Telegraph offices:					
Government.....number...	1,336	1,440	1,530	1,635	1,788
Railroad and private..... .. do.....	1,567	1,679	1,662	1,724	1,743
Total.....do.....	2,903	3,119	3,192	3,359	3,531
Employés:					
Administration.....do.....	792	877	905	934	992
Manipulation.....do.....	17,787	18,672	20,484	21,048	22,266
Total.....do.....	18,579	19,549	21,389	21,982	23,258
Receipts.....florins...	24,749,261	25,098,453	26,367,103	26,757,219	27,584,281
Expenditures.....do.....	21,167,833	21,413,931	22,619,102	23,338,436	23,934,923

*"Ärarische" post-offices are those in which the administrative and manipulating officials are salaried by the Government.

†"Nichtärarische" post-offices are offices, generally in the country, which, instead of the payment of a certain sum, are let to persons not officials of the State. They are held to give security to a certain amount and must pay their employés from their own means; but they are allowed to levy a tax of half a kreutzer for each newspaper and 1 kreutzer for each letter or postal card, etc., delivered by them.

Table showing the number of letters, postal cards, telegrams, etc., handled in Austria for the years 1884–'88.

Description.	1884.	1885.	1886.	1887.	1888.
Letters	288,100,000	299,692,400	313,820,600	317,637,000	338,272,700
Postal cards	66,419,600	60,802,100	74,503,600	77,953,500	85,188,300
Printed matter	41,460,300	41,495,000	43,247,200	44,817,000	47,156,400
Samples	8,205,300	8,660,400	8,526,900	9,002,800	9,783,600
Total	404,185,200	419,649,900	440,098,300	449,410,300	480,301,000
Money letters	11,291,600	10,792,700	10,456,100	8,873,600	7,935,700
Parcels:					
Value declared	13,258,400	14,380,200	15,562,900	13,256,600	12,392,600
Value not declared	10,812,200	11,758,600	12,553,500	14,150,900	15,656,800
Total	35,362,200	36,931,500	38,572,500	36,281,100	35,985,100
Money orders	12,624,441	12,958,389	13,369,722	13,790,374	14,545,710
Packages sent C. O. D.	3,358,261	3,490,419	3,233,511	3,323,341	3,328,619
Postal commissions (internal)	110,063	124,819	93,251	89,099	109,438
Total	16,092,765	16,573,627	16,696,474	17,202,814	17,983,767
Telegrams:					
Government (internal) *	17,099	19,913	20,559	23,730	24,213
Public service *	483,772	508,474	544,757	614,806	640,164
Internal	3,353,917	3,335,215	3,411,764	3,486,391	3,775,814
To Hungary	513,160	540,220	536,574	544,946	581,382
From Hungary	474,802	497,583	492,491	499,399	528,538
To foreign countries	864,184	844,010	889,027	938,893	1,026,261
From foreign countries	943,655	905,334	937,803	994,699	1,136,807
International transit	507,535	548,733	561,154	601,707	673,443
Total	7,158,124	7,199,482	7,394,129	7,714,571	8,386,622

* Free of charge.

Of the total of 480,300,980 letters in 1888, 305,816,500 were mailed and delivered in Austria, 55,626,290 were sent to and 49,959,740 received from foreign parts, 33,345,300 sent to and 22,516,220 received from Hungary, 4,759,100 sent to and 3,273,610 received from Bosnia and Herzegovina. The total number of newspapers, not including those forwarded in parcels and by way of book trade, was 67,912,190. Of the total of 35,985,100 pieces forwarded by the parcel post in 1888, the number of 15,656,800 were parcels, value not declared; 7,935,680 money letters, value 3,076,105,340 florins; 12,392,640 parcels, declared value 1,287,626,510 florins. The transactions in postal orders were:

	Florins.
Paid in:	
For internal intercourse	343,797,594
For international intercourse	12,296,795
Paid out:	
For internal intercourse	416,710,604
For international intercourse	15,452,457

The number of paid telegrams was 6,497,404, divided as follows: Messages from parties in Austria 5,360,597, of which 4,334,336 were for Austria and 1,026,261 for foreign parts; international messages arrived, 1,136,807. Of the total number of telegrams, 344,774 were forwarded by railroad telegraphic stations.

Table showing the number of telephones, telephone lines, etc., and their receipts and expenditures for the years 1886–'88.

Year.	Lines.	Wires.	Offices.	Subscribers.	Telephones.
State:	*Number.*	*Kilometres.*	*Number.*	*Number.*	*Number.*
1886	1	604.93	4	.....	8
1887	2	691.51	16	34	110
1888	37	2,085.6	29	128	185
Private:					
1886	11	7,671.8	23	3,250	3,378
1887	12	10,454.7	23	3,834	3,911
1888	13	14,743.3	12	4,676	4,850
Total:					
1886	12	8,276.73	27	3,250	3,386
1887	14	11,146.21	39	3,868	4,021
1888	50	16,828.9	41	4,804	5,035

Year.	Messages.	Telegrams.	Receipts.	Expenses.
State:	*Number.*	*Number.*	*Florins.*	*Florins.*
1886	985	.....	985.00	2,620.00
1887	10,041	1,129	10,949.00	6,166.00
1888	35,959	14,563	31,915.00	9,567.00
Private:				
1886	3,814,892	30,171	299,247.50	173,708.50
1887	4,805,212	102,426	354,567.00	221,660.00
1888	5,837,024	148,024	386,746.00	232,173.00
Total:				
1886	3,815,877	30,171	300,232.50	176,328.50
1887	4,815,253	103,555	365,516.00	227,826.00
1888	5,872,983	162,587	418,661.00	241,740.00

FORESTRY.

The paternal government of Austria prescribes the most stringent laws regarding the culture and preservation of the forests belonging to the imperial domain, to municipalities, or to private individuals. According to our ideas, these restrictions are rather autocratic; but they serve their purpose, and the Austrian woodlands are renowned for the good and exemplary care taken in their preservation.

The latest statistics place the total area of the productive land of the Empire at 28,406,530 hectares; of these 9,227,061 hectares are forest lands, of which 1,381,433 are hard woods, 6,587,853 pine woods, and 1,257,775 brushwood. The forests cover about the fourth part of the Empire and are of great value. Their cultivation and preservation and the administration of the laws with reference thereto are intrusted to the ministry of agriculture, the provincial presidents, and district captains. Their subordinates must all pass an examination and are divided into permanent and voluntary officers. The former are promoted like military officers; the latter enter the service for the sake of pursuing their studies practically, but receive a moderate salary. They are classified as counsellors, commissaries, and inspectors. A forest register is kept and maps are drawn of each district, which specify the number of acres covered by forest, its condition, age, and state of growth.

The total number of forest officers of all grades, public and private, employed in Austria reaches the respectable figure of 31,826.

The expenditures for Government forests are 3,546,240 florins; revenues, 3,951,650 florins; showing a profit of 405,410 florins. The Government forests contain 952,689.96 hectares; municipal, 1,297,238.21; private, 6,977,133.03.

The largest private owners are: The Emperor, 35,000 hectares; imperial family, 25,000; Archduke Albrecht, 115,000; Prince Johann Lichtenstein, 136,103; Prince J. A. Schwarzenberg, 110,718; Count Schönborn, 124,563; Prince of Saxe-Coburg, 74,181; Baron von Sina, 60,000; Prince Esterhazy, 85,000.

The following figures give the number of forest fires, damage done, and causes of origin for a period of 5 years, as stated by the latest official reports at hand: Number of fires, 1,717; area damaged, 6,551.68 hectares; amount of damages, 276,439 florins; origin—unknown, 895; improvidence, 588; malice, 151; sparks from locomotives, 69; lightning, 14.

The forest schools of Austria are divided into elementary schools, middle schools, and high schools or universities, and are doing splendid work to fit and educate young men for their future duties, and are worthy of imitation by countries like ours.

LABOR AND EMIGRATION.

The American wage worker chooses his own career and is the maker of his own fortune. He feeds and dresses well, has a comfortably provided home, and his wants are better supplied than those of the laborers of any other country. His high standard of living corresponds with the comparatively high wages prevalent in the United States, and upon these two factors depend the future education, progress, individual independence, and general prosperity of the American people.

It is quite different in Austria-Hungary. Here we find the houses, nourishment, and clothing of the workingman very different. The condition of his dwelling is very bad, and, in consequence of very high rents, he is obliged to live at a considerable distance from his place of work. His food is more abundant than substantial. His breakfast consists either of gruel or of a roll or some rye bread, together with some surrogate coffee.* Dinner means some kind of soup and vegetables, together with some rye bread, with an occasional change of vegetables, and salt or smoked pork twice or three times a week, other kinds of meat being rarely available. Sometimes beef boiled in soup forms his holiday dinner. The supper, in cities, consists of bread and beer with a piece of sausage, whilst in the country it is usually coffee and bread only. The cost of providing an average-sized family with the necessaries of life is estimated, by well-informed people, at about 550 florins a year. The average wages of skilled workmen, if employed throughout the whole year, is about 500 florins per annum; that of day laborers is about 300 florins, and workmen in factories generally receive still less. The

* Surrogate coffee means some substitute for coffee and in reality is no coffee at all.

balance to maintain life must be earned by wife and children. Under such circumstances life is but one continuous struggle to keep the wolf from the door, and only the more prosperous are able to indulge, to even a moderate degree, in the comforts of life.

The working classes of Austria are, in general, of steady, industrious, and sober habits. The small amount of wages earned allows them no opportunity of saving. Living is almost as expensive here as it is in the United States. Flour, meat, vegetables, and food in general cost as much here as they do with us. House rent is fully as high; only the price of clothing is in favor of this country.

These circumstances tell on the physical condition of the laboring classes, which, generally speaking, is not good. They are small of stature and insufficiently nourished; their intellectual capacities are not highly developed, and they do not possess the energy and practicability of our American workmen.

Politically, the workman is no factor. In Austria no man possesses the right of voting unless he pays a yearly direct tax to the State to the amount of 5 florins. In consequence of the difficulties put in the way of legal marriage, the ties of family are not strong. Children born out of wedlock reach, in Vienna, the enormous figure of 42 per cent. No special efforts for reform are made by the Government in this direction, although the Government inspectors of mills, factories, and workshops have in various ways done good work in this Empire.

On the other hand, the reactionary law called "Befähigungs-Nachweiss-Gesetz" forces every artisan to serve a regular apprenticeship and pass an examination before he may become a mechanic, and pass another examination before he can set up his own shop as an independent master in his own trade. The law also prohibits a person from pursuing more than one occupation. The effects are disastrous in many cases, as is seen in the instance of the pearl-button workmen, who are living on public charity. They can find no employment at their own trade, which has been destroyed by the enactment of the new tariff laws of the United States, and they are not permitted to follow any other occupation.

To the impoverished state of the Austrian people and to the stringent law which impresses every young man into the military service for a number of years must be ascribed the causes which lead to the present great emigration from this Empire, and which is principally directed to the United States. Peasants and working people form the bulk—about 75 per cent.—of the emigrants, while the rest consists chiefly of merchants and mechanics who strive to better their pecuniary condition and to escape the heavy burden of taxation, which in Austria amounts to about 30 per cent. of the net income and to nearly 50 per cent. of the rental value of improved real estate. Among the emigrating elements are a number of mining and mechanical engineers, young physicians, young, well-educated business men, and some other welcome accessions to our population.

From Lower and Upper Austria and from Bohemia there are a great number of families emigrating to the United States for the purpose of settling there permanently and of becoming good and law-abiding citizens, while the Hungarians, to a large extent, sojourn but a few years in the United States in order to accumulate a little fortune with which to return home to invest their savings in their native country, and, perhaps, return to the United States once more only to repeat the experiment over again. Such immigration can not be desirable. It furnishes an unfair competition to our home labor and should be considered as a sort of contract labor. These Slovakian emigrants are of the lowest class of the otherwise noble race of Hungarians. They stick to low and mean habits, which they will retain, and must prove a poor acquisition to the United States. It would be a blessing to our country if by proper legislative measures they could be excluded from our shores with any other undesirable elements. As a rule, the Hungarian day laborer is too poor to pay his fare to the United States and must be regarded as a pauper or a contract laborer imported by mining and railroad companies or their authorized agents.

Emigration in general is a spontaneous act with people from this Empire, caused by the reasons before mentioned and strengthened by favorable reports received from relatives residing in the United States; still, some agents of steamship companies have been constantly endeavoring to induce and persuade Austrians to leave their native country. The Wadowice scandal is still fresh in the memory of the people. Heavy punishment was inflicted on the unscrupulous people connected with it. All agitation and persuasion in favor of emigration has been strictly prohibited by the Government, business concessions are only granted on the condition that no propaganda must be made to encourage emigration, and the police authorities exercise an effective and strict control of all matters connected therewith. In spite of all Governmental measures tending to obstruct or prevent this exodus, emigration, especially from Hungary, has been constantly increasing, as will be seen from the following figures showing the number and sex of emigrants from Austria-Hungary to the United States during each year ending June 30, from 1881 to 1890, inclusive:

Year.	Austria.			Hungary.			Austria-Hungary.		
	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
1881	11,745	9,364	21,109	4,554	2,272	6,826	16,299	11,636	27,935
1882	11,937	8,284	20,221	6,753	2,176	8,929	18,690	10,469	29,150
1883	9,907	6,478	16,385	8,907	2,333	11,240	18,814	8,811	27,625
1884	13,142	8,631	21,773	11,239	3,559	14,798	24,381	12,190	36,571
1885	10,441	7,485	17,926	6,254	3,129	9,383	16,695	10,614	27,309
1886	10,193	6,067	16,260	9,361	3,059	12,420	19,554	9,126	28,680
1887	16,177	8,832	25,009	10,721	4,535	15,256	26,898	13,367	40,265
1888	20,227	9,784	30,011	11,999	3,801	15,800	32,226	13,585	45,811
1889	15,024	8,183	23,207	7,866	3,101	10,967	22,890	11,284	34,174
1890	23,428	10,709	34,137	16,589	5,473	22,062	40,017	16,182	56,199

The figures of the foregoing table have been taken from the report of the bureau of statistics at Washington. No reliance whatever can be placed on the official statistics on emigration as published by the Austro-Hungarian authorities, who are not in a position to state any reliable data, as the flow of Austro-Hungarian emigrants is directed to the seaports of Germany, Holland, France, and England, and as, from their fears of being detained, the majority of Austro-Hungarian emigrants quit their country without applying for passports.

The value to a country of the elements immigrating depends on the physical activity and intellectual capacities of the emigrants, which are greatest at from 15 to 40 years; and in these respects the emigrating elements from Austria-Hungary have been improving from year to year, as is made evident from the following table showing the percentage of emigrants aged from 15 to 40 years, according to sex, during the years 1881–'88:

Year.	Males.	Females.	Total.
	Per cent.	*Per cent.*	*Per cent.*
1881	60.04	50.83	56.07
1882	65.12	56.32	61.62
1883	64.06	54.76	60.33
1884	65.44	56.26	61.74
1885	63.19	56.46	61.6
1886	73.35	61.57	69.17
1887	.....	.....	70.06
1888	.....	.....	75.23

The press of this country publishes no information at all in regard to our emigration laws. It has wasted its ink in commenting in an abusive manner on our new customs law and its originators, but can not find time to acquaint the Austrian people with our laws on emigration; hence great ignorance about our restrictive laws as to contract laborers, criminals, paupers, and vagrants is prevalent in this country, especially among the lower classes, who form the bulk of the emigrants.

The United States consuls should be authorized to publish officially in the public press of this Empire a synopsis of those United States laws which have been passed to prevent the immigration of undesirable elements. The proposed measure of consular certificates will never work to advantage; in fact, it will prove useless as a check to the bad elements of emigration, whilst it will be a burden and hardship to such people as are welcome to our shores. Under existing circumstances a publication in pamphlet form of our laws on immigration would be welcomed by the Austrian Government, and more so by the local authorities throughout this Empire.

EXPORTS TO THE UNITED STATES.

The value of declared exports from the consular districts of Austria-Hungary (agencies included) to the United States for the year ended December 31, 1890, as compared with 1889, is shown in the following table:

Table showing value of declared exports to the United States.

Articles.	1890.						1889.	Increase.	Decrease.
	Buda-Pesth.	Prague.	Reichenberg.	Trieste.	Vienna.	Total.			
Albumen		$1,855.68			$9,395.87	$11,251.55	$12,044.76		$793.21
Amber					3,223.08	3,223.08	11,419.38		8,196.30
Antiquities	$480.31				1,244.74	1,725.05	6,497.25		4,772.20
Argols	11,177.65			$6,195.37	130,207.01	147,580.03	159,548.66		11,968.63
Artificial flowers		5,900.46			2,000.00	7,950.51		$7,950.51	
Art, works of	332.78	869.40				24,719.74	24,435.37	284.37	
Baskets and basket ware	2,417.18	5,765.42				21,167.88	18,816.02	2,351.86	
Beans and lentils	126,515.16	56,966.00		107,496.41		361,254.96	187,571.38	173,683.58	
Bed feathers	253.06	116,415.41				116,668.47	27,348.50	89,319.97	
Beer		60,449.43				62,574.77	43,457.20	19,717.57	
Beet-root sugar		3,584,508.84				3,585,812.52	305,343.92	3,280,468.60	
Black lead		18,902.14				18,902.14	6,634.76	12,267.38	
Books and papers	3,476.29	5,408.63		2,930.74		15,326.17	17,393.95		2,067.78
Brushes and bristles	22,695.76					36,512.59	31,132.24	5,380.35	
Buttons		207,129.30	$125,588.58			2,119,369.12	1,758,236.03	361,133.09	
Carlsbad Sprudel salt		14,452.17				14,452.17	64,239.65		49,987.48
Carriages	179.13			224.27	765.58	1,168.98	3,620.81		2,451.83
Chenilles and embroideries		2,237.84			14,727.62	16,965.46	22,636.45		5,670.99
Cloth and woolen goods		103,090.69	14,240.82		158,697.24	276,028.75	346,614.58		70,585.83
Cutlery		15,040.11	282.25		100.83	15,423.19	18,664.93		3,241.74
Cuttle bones				18,701.26		18,701.26	15,252.80	3,448.46	
Dresses					5,619.21	5,619.21	3,224.26	2,394.95	
Drugs and chemicals		26,307.69		19,575.56	42,747.03	88,630.28	75,286.15	13,344.13	
Fancy goods and jewelry		36,588.55	294,732.94		127,963.68	459,285.17	379,636.29	79,648.88	
Fans					227,319.56	227,319.56	199,512.13	27,807.43	
Fruits, dried	124,023.00	14,413.93		1,220,262.17	884.75	1,359,583.85	668,750.01	690,833.84	
Furniture	507.53	11,156.64	3,903.98		111,899.07	127,467.22	101,298.86	26,168.36	
Glassware	13,324.41	375,744.29	466,126.15		98,854.32	954,049.17	1,108,492.18		154,443.01
Gloves		166,299.28			58,206.42	224,305.70	229,583.11		5,277.41
Gum	811.03			105,942.63	22,214.48	128,968.14	87,086.39	41,881.75	
Hemp				8,091.36		8,091.36	18,646.54		9,745.18

Table showing value of declared exports to the United States.—Continued.

Articles.	1890.						1889.	Increase.	Decrease.
	Buda-Pesth.	Prague.	Reichenberg.	Trieste.	Vienna.	Total.			
Hair:									
Animal		$3,276.65			$3,899.18	$7,175.83	$4,708.19	$2,467.64	
Human		33,373.95			1,967.88	35,341.83	25,191.31	10,150.52	
Herbs, roots, and leaves	$7,861.18	391.51		$39,287.34	71.50	47,611.53	42,156.42	5,455.11	
Hollow ware					16,753.92	16,753.92	5,262.96	11,490.96	
Hops		55,445.90			2,424.37	57,870.27	74,432.82		$16,562.55
Insect powder and flowers				125,830.62	4,789.49	130,620.11	162,779.90		32,159.79
Leather and skins	4,487.06	16,405.94		51,170.78	96,983.66	169,047.44	118,282.33	50,765.11	
Linen and cotton goods		180,525.00	$110,609.13		675,390.94	966,525.07	857,530.57	108,994.50	
Macaroni				4,861.07		4,861.07	7,356.23		2,495.16
Machines and parts thereof	548.55				6,303.84	6,852.39	415.56	6,436.83	
Matches					1,945.56	1,994.56		1,994.56	
Meerschaum, crude					64,342.16	64,342.16	46,751.55	17,590.61	
Metal ware	2,101.96	9,200.77	8,432.26	158.13	68,139.25	88,032.37	63,791.16	24,241.21	
Mineral water	92,528.45	19,896.80		44.69		112,469.94	117,436.68		4,966.74
Mirror glass		38,982.90				38,982.90	10,590.46	28,392.44	
Musical instruments		24,060.33	1,815.12		8,183.49	34,058.94	19,042.26	15,016.68	
Oils and paints	799.20		952.85	21,438.36	742.62	23,933.03	20,874.26	3,058.77	
Ozocerite and ceresin				349.54	53,109.85	53,459.39	30,286.14	23,173.25	
Paper goods		51,108.98	11.72		8,051.98	59,172.68	24,891.48	34,281.20	
Porcelain and pottery	19,175.09	637,561.90	51,669.50		23,378.79	731,785.28	567,017.34	164,767.94	
Potash		30,288.76				30,288.76		30,288.76	
Pulp	1,019.99	99,992.44			105,791.29	206,803.72	121,856.20	84,947.52	
Rags				1,800.10		1,800.10	25,856.99		24,056.89
Scientific instruments					2,928.86	2,928.86	1,406.63	1,522.23	
Seeds	1,058.46			14,671.11		15,729.57	11,036.62	4,692.95	
Silks and velvets		136,397.21			275,635.58	412,032.79	310,709.42	101,323.37	
Skeletons		1,279.72			1,996.16	3,275.88		3,275.88	
Smokers' articles	69.00	4,107.20		219.27	169,131.12	173,526.59	163,666.30	9,860.29	
Sponges				12,648.26		12,648.26	7,857.39	4,790.87	
Stained glass					19,412.34	19,412.34	15,141.79	4,270.55	

Stationery	.....	1,289.14	192.67	.....	7,703.26	9,185.07	.....	9,185.07	.....
Stone and bricks	.....	.....	.....	.....	3,529.09	3,529.09	.....	3,529.09	.....
Tartar, crude	15,110.55	.....	.....	10,034.89	.....	25,145.44	.....	25,145.44	.....
Toys	.....	16,324.31	1,528.43	.....	1,657.25	19,509.99	16,731.24	2,778.75	.....
Umbrella fixtures	1,505.40	.....	.....	.....	62,718.82	64,624.22	36,140.24	26,578.58	.....
Wax figures	.....	.....	.....	.....	1,628.35	1,628.35	2,237.96	.....	609.61
White lead	.....	.....	.....	9,738.16	.....	9,738.16	16,204.00	.....	6,465.84
Wicks	.....	.....	.....	.....	1,907.08	1,907.08	980.75	926.33	.....
Wines and liquors	77,173.14	461.58	.....	4,359.95	32,802.86	114,797.53	115,723.54	.....	926.01
Wooden goods	.....	1,997.50	4,928.72	505.64	13,801.78	21,233.64	13,769.05	7,464.59	.....
Wool	.....	53,533.72	.....	4,206.11	13,799.25	71,539.08	32,718.68	38,820.40	.....
Miscellaneous	3,463.68	6,051.48	1,002.82	5,175.08	7,659.23	23,352.29	78,587.35	.....	55,235.06
Total	533,095.00	6,251,455.59	1,086,017.94	1,795,918.87	4,688,738.17	14,355,225.57	9,121,846.33	5,233,379.24	.....
Total in 1889	338,446.41	2,826,269.99	622,847.02	1,209,357.42	4,124,925.49	9,121,846.33	.....	.....	.....
Increase in 1890	194,648.41	3,425,185.60	463,170.92	586,561.45	563,812.68	5,233,379.24	.....	.....	.....
Total in 1888	412,828.30	3,091,044.81	676,623.38	1,690,042.52	4,178,943.51	10,049,482.52	.....	.....	.....
Total in 1887	489,138.05	2,450,418.47	705,951.51	2,583,025.86	3,939,303.13	10,167,837.02	.....	.....	.....
Total in 1886	232,221.79	2,691,221.41	387,922,57	1,351,984.63	3,645,293.91	8,308,644.31	.....	.....	.....

AUSTRO-HUNGARIAN ARMY AND NAVY.

Table showing the number of vessels, tonnage, etc., of the Austro-Hungarian navy in January, 1889.

Description.	Number.	Tons.	Horse-power.	Cannon.	Crews.
Ironclads:				*Number.*	*Number.*
Monitors	2	11,930	2,400	43	.....
Casemated ships	8	42,930	6,750	182	3,944
Frigates	1	5,140	3,500	25	420
Steamers:					
Frigates	2	6,860	1,200	40	914
Corvets	8	14,260	2,520	67	2,057
Torpedo cruisers	12	10,125	3,000	114	1,000
Cannon boats	6	3,470	680	19	644
Wheel steamers and yachts	6	5,890	1,300	15	600
Torpedo boats	42	1,960	2,010	7	512
Transports	4	6,010	1,600	14	332
Vessels for harbor police	5	1,200	300	10	100
Monitors (on the River Danube)	2	620	160	6	98
Total men-of-war	98	110,395	25,420	542	10,621
School ships	10	13,480	1,500	43	650
Hulks	6	11,090	.....	.....	318
Grand total	114	134,965	26,920	585	11,589

Table showing the number of officers, men, and horses of the regular army of Austria-Hungary, on peace and war footings, in 1889.

Army or corps.	Peace footing.			War footing.		
	Officers.	Men.	Horses.	Officers.	Men.	Horses.
Military authorities and commanders	2,352	1,538	.....	2,760	3,394	6,000
Bodyguards	116	540	92	116	540	92
102 infantry regiments	6,698	168,520	800	10,658	513,840	25,670
Sharpshooters	740	20,275	64	1,113	75,036	1,580
41 cavalry regiments	1,604	54,471	49,000	2,357	68,586	70,300
Artillery	1,453	32,794	10,221	2,189	102,885	76,700
Pioneers, etc	394	7,644	18	528	27,102	2,480
Railroad and telegraph regiments	46	1,360	3	117	11,874	347
Trains	275	2,556	1,337	974	42,943	52,000
Medical corps	70	2,619	1	273	20,209	.....
All others	2,332	6,360	163	5,804	12,820	1,075
Total	16,080	298,677	61,720	26,889	878,729	236,254
Austrian militia	574	3,878	167	2,948	231,978	6,496
Hungarian militia	1,269	8,977	1,516	4,178	167,188	14,814
Staffs, etc	136	90	.....	.....	.....	.....
Police corps	285	1,069	.....	285	14,980	.....
Others	148	5,095	.....	148	5,125	.....
Grand total	18,492	317,786	63,403	34,448	1,298,000	257,564

JULIUS GOLDSCHMIDT,
Consul-General.

UNITED STATES CONSULATE-GENERAL,
Vienna, March 10, 1891.

THE GERMAN CRISIS IN BREADSTUFFS.

REPORT BY CONSUL-GENERAL MASON, OF FRANKFORT.

The most notable commercial event of the present summer has been the sudden announcement recently by the Russian Government of an imperial decree forbidding, until otherwise ordered, the exportation of rye from the Russian Empire to any foreign country. This is equivalent to an official declaration that the harvest of cereals in Russia is so deficient that the export of rye must be forbidden in order to avert danger of famine.

How seriously this unexpected edict affects the bread supply of Germany, and what it means to the laboring classes of this country, will be readily appreciated.

Very little pure wheat bread is eaten by the middle and lower classes in Germany. The "staff of life" to a vast majority of the German people is black bread, made with flour ground from a mixture of rye and an inferior quality of wheat. The consumption of this material is so enormous that Germany imported 8,612,500 metre centners in 1890, or 947,375 tons, of rye, of which 7,500,000 metre centners, or 85 per cent. of the entire import, as well as 55 per cent. of the whole import of wheat into this country, came from Russia. The recent edict therefore cuts off nearly five-sixths of the entire foreign rye supply of Germany.

How difficult it would be to fill this vast deficit by increased importations from other sources will be evident from the fact that the entire export of rye from the six countries which rank next to Russia as producers of that cereal attained only the following yearly averages during the period from 1884 to 1888:

	Bushels.
Roumania	2,592,333
France	1,683,000
Servia	80,666
European Turkey	132,000
United States	1,272,666
Canada	381,666
Total	6,142,331

This is barely one-fourth of the rye import of Germany from Russia alone during the year 1890.

In view of the short cereal crops which prevail this season more or less uniformly throughout Europe, it is not certain that either France, Roumania, or Servia will have any considerable surplus of rye for export.

The deficit in Germany can not, therefore, be filled from any known source of supply on this side of the Atlantic, and the effect of this situation upon the rye market has been startling. One year ago rye was selling in Berlin for 164 marks per 1,000 kilogrammes, or $39 per gross ton of 2,220 pounds; on August 3 the effect of the meager harvest had raised the market

price to 219.50 marks, or $52.24 per 1,000 kilogrammes. Then came the Russian edict, and within 12 days the price had risen to 260 marks, or $61.88, and the end is not yet reached. Add to this a short and inferior potato crop throughout nearly the whole of Germany, the direct result of a late spring and a cold, wet, cloudy summer, and it will be seen that the food question in this country has assumed an ominous aspect.

A strong demand has been made by certain newspapers that the Government shall suspend, provisionally, the import duty on cereals; but thus far the situation has not been regarded sufficiently serious to require such a step. The only concession that has thus far been made is a reduction in the freight tariff for cereals on all the State railways of Prussia, which will go into effect on the 1st of September. This will, of course, facilitate, to some extent, the distribution of grain throughout a large portion of the German Empire; but, as a leading journal points out, it will not create a pound of breadstuffs which does not already exist, and in the end the people of Germany, like those of France and England, will have to draw upon the well-filled granaries of the United States for a large part of their food supply during the coming year.

FRANK H. MASON,
Consul-General.

UNITED STATES CONSULATE-GENERAL,
Frankfort, August 20, 1891.

AMERICAN VS. EUROPEAN TRADE IN MEXICO.

REPORT BY CONSUL FECHET, OF PIEDRAS NEGRAS.

A study of European and United States trade with Mexico at this inland port presents many interesting features.

The sharp competition in ocean freights quite equals the struggles of rival routes for railway traffic. Distance ceases to be a factor in freights. Merchandise has been shipped on through bills of lading from European ports to interior points in Mexico for as low rates as from New York to same points.

Long-haul merchandise can be sold as cheaply as short-haul merchandise. In consequence England, Germany, France, and Belgium compete actively with the United States for Mexican trade and experience but little disadvantage from the more favorable geographical position of the United States.

This subject of United States and European trade with Mexico and how to increase our own trade with our neighboring Republic is a very large one and can not be discussed *in extenso* in this report; a few remarks may be made, drawn from a fair experience and careful investigation.

Trade with a foreign country can not be solely built up by commercial treaties, however favorable and however much the needs of one country finds its complement in the surplus of the other. Individual work of enterprising,

wide-awake men must supplement that of commercial treaties, and so secure the fullest fruits of reciprocal trade.

Mexico has to-day a vast commerce, and is yearly increasing it at a rate that surprises one who knew Mexico in the revolutionary period. England, France, Germany, and Belgium seem to be fully alive to the value of this commerce and are striving to supply her wants and market her products with an energy and knowledge of the requirements of Mexican trade that our merchants could well study and profit by.

This great trade is at our very doors, and yet our manufacturers and merchants are putting forth but inadequate efforts to secure it. It will not come to them; they must diligently seek it, as their rivals in trade from Europe are doing. There is hardly a mail that does not bring to the United States consular officers in Mexico catalogues, circulars, and price lists of manufacturers in the United States seeking Mexican trade. Consuls distribute them and do all possible to promote trade, but catalogues and price lists alone do not make trade.

I doubt if there are twenty American commercial houses in all Mexico; there is probably a German house in every town of fair size in the Republic. The heads of these houses, as a rule, come to Mexico as junior clerks; one might call them commercial apprentices sent out by the great German houses of Hamburg and Bremen. These men speak Spanish, know the Mexican people socially and study their commercial needs, and are keen, shrewd traders. Every German commercial house is a center from which to watch the trade of a large district; credits can be intelligently given with a minimum risk and are much longer than can ordinarly be secured in the United States, running from 9 to 15 months.

Until our manufacturers and merchants take a lesson from our German traders, they can not expect to make satisfactory progress in securing Mexican trade.

American goods and manufactures of every line are favorably regarded in Mexico when known. This part of the commercial battle is already won, but their sale must be actively pushed by alert agents in Mexico that speak Spanish and know the people and their methods of trade.

Commercial agencies might profitably be established in the larger towns by the coöperation of several large manufacturers. Samples, not price lists, should be the equipment of such agencies; Mexicans, like other people, like to see what they may buy. The heads of such agencies will soon learn whom to trust and give credits on sales accordingly; they should be fully posted as to freights, modes of packing, customs duties, and final cost to buyer.

LACK OF STATISTICS.

In closing this report, I desire to again most earnestly call the attention of the Department to the need of adopting methods to collect statistics of what we sell to foreign countries when shipped from inland frontier ports. Our trade with Mexico by rail at Nogales, El Paso, Eagle Pass, and Laredo

reaches large amounts, but only shrewd guesses can be made about it. No sworn exhibits of these exportations are required to be made to our frontier custom-houses.

It is believed that the United States is the only country that does not accurately know what she sells to foreign countries. The filing of a sworn list of the export shipment, stating volume, quantities, and where produced, should by law be made mandatory.

EUGENE O. FECHET,
Consul.

UNITED STATES CONSULATE,
Piedras Negras, August 10, 1891.

INDUSTRIES AND TRADE OF COAHUILA.

REPORT BY CONSUL FECHET, OF PIEDRAS NEGRAS.

The State of Coahuila is receiving its full share of the general prosperity and advancement prevailing throughout the Republic of Mexico. The population of the State is 184,327, as against 144,000 by the last official enumeration.

Much attention is given to schools. To quote from the official gazette of the State—

Public instruction has augmented in the numbers of its schools in full proportion to the increase of population. There has been established a great number of special schools for boys and girls in the chief towns and villages of the State.

AGRICULTURE.

For several seasons the rainfall in Coahuila has been very scant. The spring and summer of 1891 have been marked by prolonged droughts over the larger portion of the State. In the Laguna district, an extensive region watered by the Rio Nazas and producing cotton as the chief staple, there has been a scarcity of water for the past 3 years, and this year's cotton crop, it is estimated, will be under 40 per cent. of the average annual output. The rich vineyard district of Parras also has suffered from lack of water, and the vintage will suffer somewhat. In the Sabinas district corn and cotton will yield but 60 per cent. of last year's crop, notwithstanding increased acreage. In the Rio Grande district the cotton yield will be an average one.

MINING.

Coal.—Coahuila possesses within her borders the only coal mines that are worked in the Republic, and within the State coal-mining is confined to one locality in the Sabinas region, notwithstanding that coal measures, with but little doubt, underlie the larger portion of the eastern half of the State. Coal-mining is to-day the most important industry in the State, employing more capital and labor than any other. There was mined in the year ended June 30, 1891, 105,356 tons of coal, and 4,553 tons of coke were manu-

factured. Of this large tonnage output 38,223 tons, valued at $192,112.25, were exported to the United States.

Pretious metals.—The past year has witnessed a marked growth in the mining of precious metals. New mines have been discovered and developed and work on old mines resumed under the impetus of a home market for ores.

STOCK-RAISING.

Formerly Coahuila was one vast stock range, save in the smaller valleys near water courses where agriculture by irrigation was easy and simple. Gradually and surely the larger valleys, under larger and more comprehensive systems of irrigation, are being devoted to agriculture, and stock-raising confined to the uplands. Fencing of ranges and improving stock by breeding are gradually replacing the old loose methods in vogue.

The industries of railroad construction and operation, mining of coal and the precious metals, and stock-raising employ many men, the supply of whose wants makes an excellent home market for the products of the farm, vineyard, and garden, and, in consequence, agriculture is steadily growing by increasing acreage brought under irrigation.

COMMERCE.

The past year has been one of fair business activity throughout this consular district, about coextensive in territory with the State of Coahuila. There had been some grounds to fear that the aggregate of commerce for the year 1890–'91 would reveal a great falling off as compared with that of 1889–'90. These fears were based upon the heavy losses resulting from the prolonged droughts prevailing throughout a large portion of Mexico and upon the unknown (and hence exaggerated) effects of the new tariff laws of the United States.

A review of commercial transactions for the past fiscal year in this consular district shows an increase over the preceding fiscal year (1889–'90) both in imports and exports, and, comparing values of exports and imports to and from all countries with corresponding values in former years, it is found that the commerce of this port is increasing annually.

The commerce of the year 1889–'90 was made up as follows: Exports to all countries, $2,302,994.01; imports from all countries, $4,240,440.16; a total of $6,543,434.17. For 1890–'91 there was a total of $7,779,529.51, made up as follows: Exports, $2,494,955.51; imports, $5,284,547; or a gain in 1891 of $1,236,095.34.

EXPORTS.

The total value of exports to all countries for the past 3 years is as follows: 1889, $1,734,281.73; 1890, $2,302,994.01; 1891, $2,494,955.51; a gain in 1891 over 1890 of $191,961.50. The gain in 1890 over 1889 was $568,712.28, showing that, notwithstanding an increase in value of exports at this port each year over preceding years, the rate of increase has greatly declined.

The percentage of increase in 1890 was over 25 per cent., while in 1891 it is but a little over 7 per cent. This loss of over 17 per cent. in rate of increase is chiefly due to two factors. It will be seen that the value of silver-lead ores exported in 1890 was $958,432 and $637,520 in 1891, a loss of $320,912, or over 33 per cent.; and the value of live stock exported in 1890 was $132,989.35, as against $24,097.71 in 1891, a loss in live stock exportations to the United States of $108,891.64, or over 81 per cent. We thus have an average loss on two articles of export, silver-lead ores and live stock, of 37 per cent.

As an offset to this large loss there has been a gain in values of many exports and an addition of several new exports. The chief articles of export that have been shipped from this port to the United States for the first time in 1890–'91 are: Antimonial ores, $13,303.22; silver-lead bullion, $116,577.11; copper matte, $4,075.39; cotton waste, $15,039.66; a total gain in new exports of $148,995.38.

The exports that show a marked increase over last year are coal, $30,995; horsehair, $4,000; ixtle, $64,693; nosebags of ixtle, $3,170; oranges, $9,018; goatskins, $17,342; and sugar, $2,857.

Ixtle.—The great development in the manufacture of ixtle fiber from the lechaquilla and palma real, as shown by an increase of $64,693 in 1891, is a marked feature of the year.

In a report on the "Fiber Plants of Coahuila" (CONSULAR REPORTS, February, 1891, No. 125) I called attention to the development of this comparatively new industry, and it is gratifying to note that the views there expressed as to the importance of this industry are verified by the largely increased exportation to the United States. There were exported to the United States in the fiscal year just closed 1,711,972 pounds of ixtle, valued at $79,496.52. In 1890 an experimental shipment of ixtle was made from this port to Liverpool, England. As no more shipments have gone to Europe, it is presumed that the United States offer the better market.

The large decrease in tonnage of silver-lead ores exported to the United States in 1890 as compared with 1889 has continued in 1891. Nearly one-half of the export ores shipped to the United States from this port comes from the interior consulates, and, in consequence, do not appear on the statistical records of this consulate.

The statement of declared exports from this consular district shows 5,175.51 tons in 1891, as against 14,484 tons in 1890 and 20,026 tons in 1889.

The values of ores from interior consulates shipped from this port to the United States in 1891 is $272,489.12. The tonnage corresponding to this value I have been unable to ascertain.

The total value of export silver-lead ores to the United States in 1890–'91 is $637,520.90, as against $958,432.63 in 1889–'90.

Exports to Europe.—The most marked feature of the past fiscal year as affecting trade between the United States and Mexico is the remarkable in-

crease at this port of Mexican exports to Europe shipped on bonded transit through the United States.

In 1889 the total value of Mexican exports to Europe from this port was $377,046; in 1890 it had grown to $547,127.85, and in 1891 has reached the very large sum of $1,068,768.70. This large European export is made up chiefly from four articles, viz, silver-lead bullion, silver-lead ores, copper ores, and copper matte, and divided as follows: Silver-lead bullion, 15,428,747 pounds, valued at $936,272.49; silver-lead ores (crude), 1,322,024 pounds, valued at $88,509.03; copper ores (crude), 457,340 pounds, valued at $10,745.23; and copper matte, 357,512 pounds, valued at $29,897. Excluding silver coin, the total exports to the United States are valued at $1,270,186.76 and the European exports at $1,068,768.75, or, in other words, in a total value of exports from this port to all countries of $2,494,055.51, nearly one-half is Mexican exports to Europe, and this from an inland frontier port many hundred miles from water transportation to Europe.

This increased exportation to Europe, made up chiefly of lead bullion and ores, has a very direct relation to the diminished exportation of ores to the United States, and also to the loss of $262,529.40 in value of exports to the United States in 1890–'91.

Two years ago Monterey, in the State of Nuevo Leon, did not produce a pound of silver-lead bullion, and in 1891 nearly $1,000,000 of Monterey silver-lead bullion passed this port for Europe and the United States.

This statement seems to be a sufficient description of the wonderful development of the smelting industry at Monterey in the past 18 months.

IMPORTS.

The table of imports shows a total value of importations from all countries at this port of $5,284,574 (United States coin), and for the preceding fiscal year $4,240,440.16, a gain for 1890–'91 of $1,044,033.84. The duties collected on the importations for the year amount to $1,501,332.96 (Mexican silver).

The importations from Europe and the United States arriving at this port in bond are valued at $1,054,467.69 for the year 1890–'91, as against a value of $603,509.49 for the preceding year, a gain of $450,958.20.

The products of the United States shipped in bond for benefit of drawback amount to $84,283.48, a gain of $22,456.90 for the year, and embrace chiefly beer, sugar, petroleum, manufactures of iron, cotton-seed oil, and whisky.

Deduct from the total value of bonded importations the sum of $84,283.48 for the value of United States products in bond, and there remains $970,184.21 as the value of bonded importations from Europe to Mexico at this port.

The determination of the most important commercial question, what proportion of the total importations of the year are European and American, can not be fixed accurately, as the entries at the Mexican customs do not show clearly the country of origin.

In 1889–'90 the value of European goods in bond arriving at this port was $541,682.91, a gain in 1890–'91 of $428,501.30. This large increase is due to the very great importation from Europe of railway material, street rails, spikes, fish plates, etc., estimated at $714,732, leaving for the value of all other European goods (merchandise) in bond but $255,452.21. That is believed to be less in value than for the previous fiscal year, and hence it is concluded that, exclusive of railway material, the importations from Europe were less in 1890–'91 than in 1889–'90, and, as the total importations from all countries show a gain of $1,044,133.84, this gain has largely come from the United States.

The chief European imports are agricultural implements, machinery, structural iron, drugs and chemicals, soda potash, aniline colors, dyestuffs, hosiery, buttons, cottons (drillings and sheetings); cotton threads, linen and silk fabrics, woolens, ready-made clothing, earthen and glass ware, cutlery, paper, cardboard, etc.

IMPORTS FROM THE UNITED STATES.

With the exception of the record of the bonded shipments from the United States for benefit of drawback (value, $84,283.48), we have no statistical data to accurately determine the total value of United States exports entering Mexico at this port. However, by careful calculations along indirect lines, it is estimated that the imports at this port solely from the United States in 1890–'91 amount in value to $4,314,389.79, as compared with $3,698,757.25 for 1889–'90, a gain of $615,632.54.

Of the merchandise embraced in this large importation we have details covering $1,571,429.48, or about 36 per cent., viz: Cotton in bales, $319,576.50; lumber, furniture, etc., $56,875.50; petroleum (crude), $96,879; live stock, $1,013,816; United States products in bond, $84,283.48.

There remains $2,742,960.31 of estimated United States exports for which there is no data to show kind and value.

Food products, machinery, railway material, agricultural machines and implements, sewing machines, cotton and woolen goods, cutlery, boots and shoes, hardware, paints, drugs and chemicals, carriages, wagons, and cotton-seed oil are the chief items that make up the $2,742,960.31 of unclassified United States exports.

In my last commercial report special attention was called to the very remarkable and rapid growth of the live-stock importations into Mexico. In 1889–'90 this trade reached the grand total of $1,032,121, and this year the figures are $1,013,816 (United States coin), upon which the Mexican customs duties were $124,692.30 (Mexican silver).

Of this large live-stock exportation hogs constitute the largest share, there having been exported to Mexico 49,739 head, valued at $887,114.

It is very gratifying to know that this most valuable trade has experienced no material abatement in the fiscal year just closed.

Shipments of cotton in bales at this port more than doubled this year, there having been imported from the United States 8,359 bales in 1890–'91 and 4,108 bales in 1889–'90.

Owing to the severe droughts, the cotton crop this year in Mexico will be much below the yield of last year, and larger shipments from the United States may be looked for.

The same disastrous cause, the drought, has made heavy losses in live stock. Cattle and hogs are reported dying in large numbers.

The meat supply of Mexico will be short, and cattle and hogs from the United States must replace the home deficit, and, in consequence, it is very probable that live-stock exports to Mexico will be sensibly increased.

EUGENE O. FECHET,

UNITED STATES CONSULATE, *Consul.*

Piedras Negras, August 10, 1891.

TREATMENT OF CHLOROSIS IN PLANTS AND TREES.

REPORT BY COMMERCIAL AGENT SMITH, OF MAYENCE.

About 2 years ago Professor Sachs, of Wurzburg, published a small pamphlet on the treatment of chlorotic garden plants and trees, in which he urged the use of copperas (green vitriol) in the treatment of garden plants for chlorosis, claiming that it was the best remedy that could be employed. This malady, which, in its advanced stage, causes the leaves of plants to turn white, is due to a lack of iron in the soil or to too rapid growth. From 5 to 9 kilogrammes (11 to 20 pounds) of copperas can be entirely absorbed, it is said, by 1,000 litres (1,056 quarts) of garden earth. If it is desired to heal chlorotic plants and trees of their trouble, the soil in which they are growing should be abundantly supplied with iron; but not in a concentrated form, as this might injure the roots, but in such a way that the salt would be gradually taken up by the ground. Professor Sachs recommends that a ditch of 20 to 30 centimetres (8 to 12 inches) in width and depth be dug around the tree or bush that is to be treated at a distance of 50 to 100 centimetres (half a yard to 1 yard) from it and a plentiful supply of water poured in. Then the copperas is introduced at the rate of 2 to 3 kilogrammes ($4\frac{1}{2}$ to $6\frac{4}{5}$ pounds) for small bushes or trees and 6 to 8 kilogrammes (13 to $17\frac{1}{2}$ pounds) for larger ones. The earth dug from the excavation is then replaced, being thoroughly mixed with the copperas by means of a hoe while being put back and afterwards well saturated with water. The sulphate dissolves gradually, some with each rain that falls.

This treatment will bring back to growing leaves their color, but full-grown leaves that have lost their color will not receive it back.

The publication of Sachs's has led the Royal Institute for Fruit and Vine Culture, at Geisenheim, near here, to make experiments with his remedy, and in its printed report of work done during the year 1889–'90 it gives the result thereof. A large number of fruit trees were subjected to the cure, not only for the real chlorosis, but for other premature loss of color in the leaves. Small trees received 1 kilogramme ($2\frac{1}{5}$ pounds), large ones 2 kilogrammes ($4\frac{2}{5}$ pounds), of copperas in the manner prescribed. The success met with

was, with very few exceptions, exceedingly gratifying, and in most cases the leaves took on again their green color. Growing trees were more certainly restored than matured ones. Often the favorable effect of the treatment appeared at the end of 8 days. The general result of the experiments showed that certain kinds of fruit trees require a larger amount of iron than others, or incline in a greater degree to loss of color in the leaves.

Applications of the copperas were also made to see if parasites could not be dispersed by it also, as it is known that a change of the aliment a plant receives will sometimes drive them away. Experiments made in the spring on various dwarf apple trees achieved the desired effect in the case of certain plant lice, while applications made in summer to other trees had not, on any kind of plant lice, the effect sought. While, therefore, in this particular nothing positive can be affirmed for all cases, the experiments are regarded as worthy of consideration and frequent repetition, for which the spring should be chosen.

JAMES H. SMITH,
Commercial Agent.

UNITED STATES COMMERCIAL AGENCY,
Mayence, June 5, 1891.

COFFEE INDUSTRY OF NICARAGUA.

REPORT BY CONSUL NEWELL, OF MANAGUA.

According to statistics from the department of the minister of hacienda, it is ascertained that the quantity of coffee exported from Nicaragua during the past 10 years has been as follows:

Year.	Quantity.	Year.	Quantity.
	Pounds.		*Pounds.*
1881–'82	12,026,200	1886–'88	12,424,300
1882–'84	12,696,400	1888–'90	19,786,400
1884–'86	14,247,200		

The harvest of the year 1890 will approximate, according to the calculations of various coffee planters and exporters, 11,300,000 pounds. In that estimate are also included 1,500,000 pounds that were consumed in this Republic. The above deduction is based upon the supposition that 1 manzana (nearly 2 English acres) is sufficient to grow 1,020 coffee plants, and that the plants will produce 1,000 pounds of coffee yearly.

It is believed that the total area of land used in the cultivation of coffee in all this Republic amounts to 14,000 manzanas. This also includes 3,000 manzanas of young coffee plants that have not yet commenced to produce.

According to the public records, the lands denounced from December 1, 1889, until December 31, 1890, amount to 24,598 manzanas, of which number 16,740 manzanas, it is estimated, are fit for the cultivation of coffee. The following is a detailed list of the different departments in Nicaragua,

showing the number of manzanas denounced in each department and the number suitable for the growing of coffee:

Departments.	Denounced.	Fit for coffee.
	Manzanas.	*Manzanas.*
Nueva Segovia	148	.....
Chinendega	150	.....
Leon	161	.....
Granada	750	240
Chontales	975	100
Rivas	2,617	500
Masaya	4,687	3,308
Managua	6,559	4,101
Matagalpa	8,551	8,491

There are one hundred and sixty-four claimants to the lands named above, and among them six foreigners, who became owners of Government lands at the period referred to through the medium of preëmption.

It appears that the mountains and high plains of the department of Matagalpa are the places most sought by agriculturists, as will be seen by the fact that the preëmptions cover the respectable figure of 8,551 manzanas, of which only 60 manzanas are adapted to coffee.

The hills of Managua, also, still offer a large contingent of land suitable for planting coffee; 4,101 manzanas are the number dedicated to that industry in the 13 months referred to.

The following table shows the quantity of coffee shipped from Nicaragua to various countries of the world from 1879 to 1888. I have been unable to gain any data upon the shipment of coffee for the years 1889 and 1890.

Countries.	1879.	1880.	1881.	1882.	1883.
	Quintals.	*Quintals.*	*Quintals.*	*Quintals.*	*Quintals.*
England	19,196	21,616	24,254	30,704	19,550
France	3,382	3,441	6,337	9,105	9,714
Germany	3,763	4,390	6,239	11,358	10,572
Italy	284	3,353	2,893	1,061	1,112
United States	8,532	12,483	9,592	21,685	13,564
Colombia	.....	.....	.....	174	42
Chile	227	.....	.....	196	.....
Central America	4	.....	.....	.....	27

Countries.	1884.	1885.	1886.	1887.	1888.
	Quintals.	*Quintals.*	*Quintals.*	*Quintals.*	*Quintals.*
England	19,074	21,187	18,072	8,288	20,488
France	7,392	9,947	10,971	5,000	14,261
Germany	21,982	18,793	17,776	18,102	14,356
Italy	111	52	382	250	4,839
United States	23,820	20,336	23,314	27,000	34,261
Colombia	.....	6	249	70	.....
Chile	.....	.....	1,496	800	.....
Central America	.....	.....	44	60	.....
Spain	.....	.....	46	.....	.....

NOTE.—1 quintal=100 pounds.

The bulk of the coffee exported from Nicaragua goes to Europe, which can be seen by an examination of the above table. This is owing to the fact that the freight rate to the United States is higher, and also because the European houses give better facilities to the shippers of coffee.

The principal wealth of Nicaragua lies in her coffee plantations. Every year sees this industry augmented, and the time is coming when the coffee of Nicaragua will take stand with the best. This coffee is far superior to the coffee of Brazil; but this fact is unknown in the United States, because coffee brokers have not taken the pains to properly present the coffee to the public.

The department of Matagalpa in a short time will produce as much coffee as has been raised in the past in all the rest of Nicaragua. It is estimated that there are now in this department under cultivation 2,000,000 trees, which in about a year and a half will begin to yield. Ten million pounds of coffee should be produced annually from that number of trees.

Matagalpa labors under one disadvantage, and that is the want of the proper means of transportation for her produce. At the present time she has to depend entirely upon her wagon roads, but which, on account of the rough, mountainous country through which the roads pass, make it extremely difficult and expensive to carry the coffee to market. The Government, however, has in contemplation a railroad into this department, and before long the obstacles to transportation will disappear.

WILLIAM NEWELL,
Consul.

UNITED STATES CONSULATE,
Managua, June 13, 1891.

AMERICAN SHEEP IN SOUTH AFRICA.

REPORT BY CONSUL HOLLIS, OF CAPE TOWN.

Over a year ago I opened correspondence with Mr. Hanson F. Deane, of West Cornwall, Vt., called forth by my report to the Department. The question was presented, why could not American-bred rams be imported into this colony, and much information on this subject was furnished me by Mr. Deane.

Among others to whom this correspondence was shown was the Hon. Joseph M. Orpen, who is largely engaged in sheep husbandry and takes a lively interest in all that pertains to the industrial advancement of the colony.

From the following letter of Mr. Orpen's it will be seen that my efforts have borne fruit, and I have a lively hope that this is only the beginning of a considerable trade.

SIR: I did myself the honor to call upon you last year and ask information with regard to American stud sheep, mentioning that such information might lead to some business being done between the United States and this colony, which trade had hitherto been prevented altogether by absolute want of knowledge regarding American flocks, not a sheep, I believe, up to then having been imported here from America. From information you gave me, which

led to my obtaining still more, I have been able to secure: (1) The New York Merino Association Register, vols. 1 and 2; (2) the register of the Vermont Atwood Merino Sheep Club, vol. 1; also several photographs of rams and ewes from New York and specimens of wool. Finally, I ordered as a trial shipment four rams from New York, of Mr. Markham, through Messrs. Van Der Byl & Co., of Cape Town. One died on the voyage; the others have just arrived. They are much admired, and I think this will lead to more business, as I believed would be the case when I first spoke to you on the subject. I have here to compare with these sheep imported from Saxony, Victoria, Tasmania, and elsewhere. You will see from this that I am impartial and wish to obtain and impart reliable information. I shall show the books, etc., to members of Parliament during our coming session, also photographs and specimens of wool. Besides this, many visit and see the animals for themselves. My object in writing is to take the liberty of mentioning my opinion that if such books as I have indicated were furnished to you for your consular library, and perhaps photographs and specimens of wool, it might be of value to both countries and promote trade between them. In a book now before me, the American Merino, I find mentioned other breeds of sheep of considerable celebrity in America, as follows: The Delaine merinos, the national improved Saxony, and the black top merino. These three breeds are represented by associations of breeders, and have registers—printed and illustrated volumes—which would be of use in your library, with specimens of wool, photographs, etc., for each race has characteristics which will cause it to have its admirers here in parts where these characteristics are suitable to the country or to improve special breeds already in such parts. May I suggest your mentioning this to the secretaries for agriculture of the States of Ohio, Pennsylvania, Vermont, Michigan, and Virginia, where stud-sheep breeders are. The headquarters of the three races mentioned above appear to be in Washington County, Pa.

If any of the associations named would consider it worth their while to send such volumes, specimens, and photographs to me, they would secure an effectual advertisement, as the result of the information already received will show you.

Faithfully yours,

JOSEPH M. ORPEN, *M. Q. A.*

I have given this letter of Mr. Orpen's special prominence for the reason that it gives so fully the views of a practical sheep-breeder and adds weight to my convictions on this subject.

I have also at hand a letter from another sheep-breeder, Mr. Charles R. Whitherell, of Cornwall, Vt., in which he says:

I received your letter of December 5, and I have decided to make the venture, and will leave New York for the Cape about April 15 with forty-five of the best breeds of rams, all of which are registered and of the best pedigree. I shall probably arrive about June 1.

I have scattered the news of this shipment of blooded stock throughout this colony, the Orange Free State, Transvaal, and Natal, and entertain high hopes of a successful issue, and shall take particular care in selecting the fittest place for exhibition.

While a new Africa is being opened to settlement in the region north of the Transvaal and south of the Zambezi River and a class of people are coming in who are imbued with the progressive ideas of the period, it is no less true that the people of the older settlements are awakening to the truth that they are behind the times and are realizing that to compete with the world they must adopt modern improvements. By reason of the influx of immigrants consequent on the occupation of the Zambezian territory, a larger market will soon be opened to our manufacturers of agricultural and

mining machinery; and the native people, though now working to earn sufficient money to purchase the requisite number of cattle to exchange for wives, will soon find their wants broadened by contact with the white race, which will augment greatly the volume of trade, of which, I trust, the United States will secure a liberal share.

GEO. F. HOLLIS,
Consul.

UNITED STATES CONSULATE,
Cape Town, May 12, 1891.

ENGLISH-SPEAKING EMIGRANTS IN BRAZIL.

REPORT BY MINISTER CONGER, OF RIO DE JANEIRO.

In view of the fact that this legation is constantly in receipt of communications from various parts of the United States from persons thinking of emigrating to Brazil, I have the honor to inclose a clipping from the Rio de Janeiro News of June 23, 1891, which shows the destitution frequently resulting from hasty emigration.

I may add that anyone not speaking the language will find it very difficult to obtain employment, and I suggest that these facts be given in some form to the public.

E. H. CONGER,
Minister.

UNITED STATES LEGATION,
Rio de Janeiro, June 24, 1891.

ENGLISH AND IRISH IMMIGRANTS IN BRAZIL.

[Inclosure in Minister Conger's report.—From the Rio de Janeiro News of June 23, 1891.]

Of the English and Irish immigrants who arrived here in February last many have already come to grief. They were sent up to São Paulo, where the majority of them still remain; but some have found their way back to this city, a considerable number have gone to Paraná, and for a time a large number were living a life of vagabondage in the streets of Santos. There are a dozen or so still there without means and without employment, and subscriptions are being solicited to send one poor woman back home. Of those who came back to Rio, one case deserves particular mention. Not a month ago two married couples—one English and the other Irish—returned to this city, and appeared to have made a great part of the journey on foot. They arrived here in a state of extreme destitution and exhaustion, and found shelter only through the benevolence of a stranger. The two men obtained work, but both soon took the yellow fever and died. The Englishwoman also died, more from destitution, perhaps, than fever, and left a half-starved little girl 2 or 3 years old to the charity of strangers. The other woman escaped the fever, but is extremely poor and in a delicate condition, and will eventually be sent back home. This is, perhaps, no worse than many other cases which have happened, but it shows what the English immigrant may expect in a country so different in every respect from what he has been accustomed to. All these people complain of the deceptions practiced to induce them to emigrate, while some of them complain of deliberate swindles, which ought to be exposed and punished. One of these appears to be the sale of tickets to interior localities, which are found to be worthless on their arrival here. There are no inducements whatever in Brazil for farm and unskilled laborers, and the more thoroughly that fact is advertised throughout Great Britain the better.

BERLIN INSANE ASYLUM.

REPORT BY CONSUL-GENERAL EDWARDS.

The number of persons suffering from diseases of the mind who were under municipal care at one time was, on the average, as follows:

Year.	Number.	Year.	Number.
1883	1,582	1887	2,174
1884	1,722	1888	2,320
1885	1,868	1889	2,501
1886	1,979		

This increase exceeded the rate of increase of population three to one. While the population increased in this period 22.49 per cent., the number of mentally deranged persons under the care of the city increased 59.79 per cent. This, however, is stated not to be due to an increase of insanity, but to the improved facilities of the institution, the insane being less than 0.2 per cent. of the entire population.

The following table is taken from the Berlin Medicinal Encyclopedia, vol. x, p. 350, the figures being correct on December 1, 1880:

Provinces.	Total number of deranged persons.	Number per 10,000 of population.	Persons in insane asylums.	
			Number.	Per cent.
East Prussia	4,044	20.9	578	14.3
West Prussia	2,961	21.1	434	14.7
City of Berlin	1,985	17.7	1,193	60.1
Brandenburg	5,695	25.1	1,941	34.1
Pomerania	3,418	22.1	765	22.4
Posen	2,738	16.1	366	13.4
Silesia	8,357	20.9	2,228	26.7
Saxony	4,809	20.8	1,333	27.7
Schleswig-Holstein	3,800	33.7	1,181	31.1
Hanover	6,317	29.8	2,119	33.5
Westphalia	5,348	26.2	1,285	24
Hesse-Nassau	4,715	20.3	1,497	31.7
Rhineland	12,020	29.5	3,924	32.6
Hohenzollern	138	20.4	50	36.2
Total	66,345	24.3	18,894	28.5

The municipal asylum at Dalldorf originally offered accommodations for 1,000 patients. By careful rearrangement its capacity was extended to 1,300, and in 1887 two so-called colonies were established at a distance of 15 or 20 minutes from the central institution. These colonies look more like ordinary country houses than like insane asylums, and they offer the beneficial influence of agricultural employment to about 60 males. A hot-

house near by gives cheerful employment to others, and the cut and potted flowers thus obtained are used to beautify the rooms of the unfortunates. Many patients also take a keen interest in the raising of poultry.

Accommodations, however, were entirely insufficient, and many applicants had to be sent to private asylums. At the end of March, 1889, there were twenty-three private asylums with 1,150 patients—543 men and 607 women. These private institutions are under the supervision of the *Curatorium* of the municipal insane asylum, each member of the *Curatorium* having certain private asylums to visit at least once during the year. A written report of each such visit must be made to the *Curatorium* at its next following sitting.

While many of these private asylums have the advantage of cheerful situations and home life, still, as a rule, they do not give the patients sufficient occupation. It is, however, hoped that this temporary arrangement will continue sufficiently satisfactory until the new asylum has been finished.

It has been found that many insane persons are capable of doing useful work outside of the asylum, and, accordingly, many of them have been placed in private families in the villages near the asylum, where they are under the constant supervision of the asylum physicians, a sum not exceeding 20 or 25 marks per month being paid out for each person thus cared for. Besides being better for the patient, this plan was found to be cheaper for the institution.

In order not to make the insane asylum an institution for the poor exclusively, on March 13, 1883, the following regulations were adopted:

(1) The number of such paying inmates must not exceed 50 per cent. of the total number.

(2) The rate to be paid is to be decided by the *Curatorium* after careful inquiry in regard to the property belonging to, and the income of, the patient and those responsible for his sustenance. This amount can not be less than 1 mark per diem.

(3) The paying patients have no right of claim to treatment different from that accorded to charity patients.

To what extent this arrangement has been made use of is shown in the following tables:

Table showing the number of nursing days and expense.

Year.	Number of nursing days.	Expense.		
		Paid by patients' relatives.	Paid by the city.	Total.
		Marks.	*Marks.*	*Marks.*
1883–'84	5,899	7,262.21	4,423.68	11,685.89
1884–'85	4,850	5,949.28	3,231.77	9,181.05
1885–'86	3,387	4,445.24	1,559.98	6,005.22
1886–'87	11,860	16,384.00	6,149.94	22,534.00
1887–'88	10,099	14,572.65	3,656.34	18,228.99
1888–'89	14,867	22,771.86	5,208.81	27,979.67

Table showing the number of persons admitted.

Rate.	1883–'84.	1884–'85.	1885–'86.	1886–'87.	1887–'88.	1888–'89.
Per diem:	*Number.*	*Number.*	*Number.*	*Number.*	*Number.*	*Number.*
1 mark	11	15	13	20	16	15
1.20 marks					1	1
1.25 marks					1	1
1.32 marks		1	1	9		1
1.50 marks				1	2	2
1.60 marks				2	1	1
1.75 marks					1	1
1.90 marks						11
2 marks	12	4	7	10	12	18
Per month:						
30 marks		1	1	1	1	1
39 marks						1
39.50 marks					1	
45 marks						1
50 marks					1	1
Per annum:						
400 marks						2
600 marks				1	1	1
700 marks					1	1
900 marks			1			
Total	23	21	23	44	39	59

The inner life of the asylum has expanded in various directions. During the period under report a new teacher was added to the staff, whose business it is to instruct in elementary branches patients sent to him by the physicians and to interest others in geography, history, and the natural sciences. Also, under medical oversight, he directs small musical, declamatory, and theatrical entertainments. This teacher has also charge of the library and leads the singing on Sundays.

The following table shows by groups the sort of employment given to the patients in the two larger pavilions:

Date.	Number of patients.	Employment.					
		Field laborers.	Hand laborers.	Asylum bureaus, kitchens, etc.	Hair and straw workers.	House domestics.	Total.
		Per cent.	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*
June 5, 1884	251	11.5	9.2	6.3	0.8	13.5	41.4
September 30, 1884	279	17.9	9	6.1	6.1	10.4	49.1
December 12, 1884	273	15.4	11	7.3	7.3	12.5	53
April 1, 1885	261	20.7	9.2	8	9.6	11.9	59
August 20, 1885	250	24.4	10.8	9.2	9.6	11.2	64
December 15, 1885	262	21	8.8	11.5	9.9	13.8	64
March 5, 1886	259	17	10	11.2	10.4	12.4	61

In the year 1888–'89, 36 men did 8,450 days' work in the field and 16 women 838 days' work during the summer. In the park 84 patients did 19,820 days' work.

In regard to the employment of the hand-workers in 1888–'89, the following table gives detailed information:

Month.	Tailors.			Shoemakers.			Carpenters.			Bookbinders.		
	No.	Time worked.		No.	Time worked.		No.	Time worked.		No.	Time worked.	
		Hours.	Days.*		Hours.	Days.*		Hours.	Days.*		Hours.	Days.*
April	7	1,078	154	18	2,233	319	14	1,813	259	3	203	29
May	7	1,162	166	17	2,583	369	15	1,897	271	1	175	25
June	9	1,435	205	18	2,982	426	16	2,422	346	1	182	26
July	10	1,624	232	17	2,737	391	15	2,478	354	1	182	26
August	10	1,771	253	17	2,653	379	16	2,359	337	2	273	39
September	9	1,568	224	14	2,219	317	14	2,254	322	1	175	25
October	9	1,652	236	13	2,184	312	14	2,254	322	2	301	43
November	10	1,750	250	13	2,120	310	15	2,380	340	1	182	26
December	12	1,736	248	11	1,729	247	15	1,981	283	1	161	23
January	10	1,666	238	15	2,072	296	12	1,967	281	2	336	48
February	8	1,344	192	14	2,170	310	15	2,086	298	2	336	48
March	10	1,610	230	12	2,058	294	15	2,191	313	2	357	51
Total	.....	18,396	2,628	.....	27,790	3,970	.....	26,082	3,726	.....	2,863	409

Month.	Upholsterers.			Straw-plaiters.			Painters.			Hair-pluckers.		
	No.	Time worked.		No.	Time worked.		No.	Time worked.		No.	Time worked.	
		Hours.	Days.*		Hours.	Days.*		Hours.	Days.*		Hours.	Days.*
April	8	1,246	178	10	1,225	175	2	322	46	17	2,114	302
May	8	1,281	183	10	1,407	201	2	350	50	10	1,435	205
June	9	1,260	180	15	1,757	251	2	364	52	7	175	25
July	10	1,456	208	10	1,736	248	6	1,092	156	.....	.....	.....
August	10	1,806	258	9	1,540	220	6	1,134	162	.....	.....	.....
September	10	1,379	197	10	1,379	197	2	350	50	.....	.....	.....
October	2	378	54	10	1,456	208	2	378	54	28	4,326	618
November	2	357	51	16	1,638	234	2	203	29	29	3,591	513
December	2	336	48	12	1,862	266	2	294	42	29	3,766	538
January	2	350	50	13	2,072	296	3	364	52	35	3,864	552
February	2	336	48	12	1,855	265	3	364	52	31	3,584	512
March	2	364	52	14	2,030	290	3	546	78	23	3,171	453
Total	.....	10,549	1,507	.....	19,957	2,851	.....	5,761	823	.....	26,026	3,718

*7 hours.

In addition to these, during the course of the year there were engaged outside of the workshops in the pavilions: As tailors, 10 persons working 13,405 hours, or 1,915 days; as shoemakers, 4, working 5,663 hours, or 809 days; as bookbinders, 1, working 1,596 hours, or 228 days; as hair-pluckers, 6, working 1,603 hours, or 229 days; as cigar-makers, 2, working 756 hours, or 108 days; as brush-makers, 2, working 3,500 hours, or 500 days.

The value of the work thus done in 1888–'89 was 9,598 marks. The value of work done by women in the sewing rooms was 7,278 marks.

During the period under report the sanitary condition of the asylum was entirely satisfactory, there having been no epidemics.

The drainage is all used on the asylum's irrigated farm. The employment offered to the patients is of many sorts. The number of males in the insane department who were given employment in the year 1886–'87 was 65.4 per cent. of the whole number.

The asylum library contains 1,465 volumes.

Small dances, musical evenings, and theatrical performances (patients being usually the actors) are permitted for the entertainment of the unfortunates.

In the year 1888–'89 about 60,000 tons of coal were used at the asylum.

In view of the fact that as much freedom of movement as possible is allowed to the patients in garden, field, and workshops, there is little cause for wonder that there are some escapes. The number of these escapes was as follows:

Year.	Number.	Year.	Number.
1883–'84	23	1886–'87	29
1884–'85	22	1887–'88	34
1885–'86	22	1888–'89	32

Most of these, however, were harmless patients; the others were more closely watched.

Owing to the nature of the institution, it has been found difficult to keep servants for any length of time, notwithstanding that the wages paid are comparatively high. In addition to free board and washing, the overseers receive, on the average, 1,000 marks per annum; the female overseers, 750 marks; male employés, 450 marks; and female employés, 350 marks.

The cost of keeping each patient was, in 1886–'87, 2.01 marks per diem; in 1887–'88, 1.929 marks; and in 1888–'89, 1.86 marks.

	Marks.
Paid to private asylums per diem for each patient cared for at municipal expense	1.80
Clothing, underclothing, bed linen, etc	.13
General contingent expenses	.075
Pro rata expense:	
Vehicles	.004
Christmas presents	.013
Assistance upon dismissal	.001
Funerals	.001
Interest	.009
Average expense incurred per diem for each person confined at municipal cost in a private asylum	2.033

From April 1, 1887, the magistracy fixed the rate at 1.90 marks per diem, both for patients in private asylums and for patients in the municipal asylum at Dalldorf. This amount, however, is insufficient, and in 1888–'89 the deficit was 24,720 marks greater than in the preceding year. In 1887–'88 the amount was 135,184 marks; in 1888–'89, 159,904 marks.

The amount given out for patients nursed in private families in the villages near the asylum in 1888–'89 was, for a total of 18,481 nursing days,

14,503.55 marks, or 0.785 mark per diem, as compared with 0.725 mark in the preceding year. By a special arrangement with the Charité Hospital all persons found in the city to require immediate asylum care were first taken to that institution. So soon as they were found to be incurable, however, they were removed to Dalldorf.

The following table shows that the insane department of the Charité Hospital serves almost entirely as a depot for the municipal insane asylum:

Year.	Number of deranged persons admitted into the Charité Hospital on municipal account.	Number of nursing days.	Under charge of—			
			City of Berlin.		Charité Hospital.	
			Patients.	Nursing days.	Patients.	Nursing days.
			Number.	*Number.*	*Number.*	*Number.*
1882–'83	860	33,809	830	31,973	30	1,836
1883–'84	890	37,773	844	34,930	46	2,843
1884–'85	962	34,448	931	33,666	31	782
1885–'86	1,026	36,315	992	35,031	34	1,284
1886–'87	1,130	36,648	1,110	35,611	20	1,037
1887–'88	1,179	37,772	1,158	37,260	21	512

For insane patients alone the city paid to the Charité Hospital, in 1887–'88, 113,316 marks.

W. H. EDWARDS,
Consul-General.

UNITED STATES CONSULATE-GENERAL,
Berlin, May 2, 1891.

AMERICAN-BRAZILIAN TRADE.

REPORT BY CONSUL-GENERAL DOCKERY, OF RIO DE JANEIRO.

I have the honor to inclose the following interview, requested by a leading Brazilian of this city. Said interview was sought by him in person. At my instance his interrogatories were put in writing, the original of which, with my answers thereto, are respectfully forwarded to the Department. I declined, with his consent, to publish them here directly from this office without the acquiescence of the Department. Consequently, I inclose the whole case to you, respectfully suggesting its publication in the CONSULAR REPORTS. It answers, I think, fully all the objections urged here to the treaty and more fully still the hundreds of inquiries reaching me from the United States, which I can not answer promptly nor often satisfactorily.

This whole issue, in practical results, hinges on queries numbered 5 and 6, and, unless observed substantially as answered, in my judgment no good will result. No goods can be sold here by sample. The competition is now too sharp, and the resolution among competing nations is too determined for such a roundabout, delaying process to win. Indeed, the "commercial

traveler" is regarded here as a peculiar American institution, and, under the new phase, as farcical; contrary, at such a distance, to business habits; in utter disregard to the wants, views, and usages of the people; and a complete fulfillment of the damaging assertion that the United States merchants and manufacturers will not observe "peculiar customs," but will continue to "force their goods on the people of Brazil." In that event the proverbial "we told you so" aptly comes in. Success demands—as other nations have ascertained and are now practicing—the actual establishment of warehouses with goods for sale and delivery, either on consignment to responsible parties or under the superintendence in person of the owners thereof. This is now a wonderful field for enterprise, and other nations are actively engaged in reaping a large percentage of the rich harvest. American merchants can not afford to lose it, and, if properly utilized by them, will furnish remunerative markets for goods now produced largely in excess of home demands.

O. H. DOCKERY,
Consul-General.

UNITED STATES CONSULATE-GENERAL,
Rio de Janeiro, April 16, 1891.

QUESTIONS PROPOUNDED TO CONSUL-GENERAL DOCKERY.

[Inclosure 1 in Consul-General Dockery's report.]

(1) Can Brazilians consider that the recent treaty is the result of a general consensus of opinion of the commerce of the United States, or is there any basis for the suspicion that the treaty has political tendencies in which Brazil has no interest?

(2) Has the commerce of the United States carefully investigated the necessities of Brazilian consumers? Peculiarities that have for years been studied by European merchants engaged in the Brazilian trade require an attention from the American merchants desirous of entering into competition that has not, so far, been very apparent.

(3) Are manufacturers in the United States prepared to furnish what is asked for? By this we mean, will the manufacturers furnish cotton goods of a quality lighter and cheaper than the general class of American fabrics used in the United States, that are not suitable, in many cases, for the needs of markets in the tropics? Will hardware be furnished as required, without the attempt to force upon consumers articles they do not want merely because these articles are accepted in the United States?

(4) Does the consul believe that American merchants are prepared to grant those credit facilities to which our traders have become accustomed? Without discussing the question of credit or cash, we submit that the usages of commerce in Brazil are of difficult modification. If means of communication with the interior have developed, the system of the dealers of the interior has not. Sales of merchandise are made to farmers and planters on credit, and the Rio de Janeiro dealer must grant his purchaser similar facilities.

(5) If there be really an organized movement on the part of American merchants to claim a due share of Brazilian trade, how can it be satisfactorily explained to German, French, Belgian, and British merchants that the commerce of the United States declines to establish houses in Brazil?

(6) The consul is aware that the advantages offered Brazilian merchants by those of the United States have so far been restricted to a class of "commercial travelers" furnished with samples, ignorant, in many cases, of custom-house regulations, foreign exchanges, etc.; whereas the European merchants carry important stocks, educate staffs of clerks, and enjoy

credit that is unattainable by a representative whose stock in trade only too often consists of catalogues.

(7) Does the consul think that the people of the United States have considered possible demands to be made upon them for the development of Brazil? A new, growing, and, in great part, unimproved country, Brazil must be a borrowing nation for years. Will the United States furnish those facilities hitherto granted by England, France, Germany, etc., application to which has become impossible with the decreeing of the treaty? Do the merchants of the United States entirely understand that Europe can not be called upon to furnish cash to pay for American products?

(8) Does the consul think that the true position of exchanges between Brazil and the United States is thoroughly understood by American merchants? Do these appreciate that the coffee, rubber, sugar, and hides imported from Brazil are not paid for in gold, coin, or bullion, but by the exports to Europe of American products, viz, petroleum, cotton, cereals, pork and bacon, beef, tobacco, etc.? And has the manner of settling the balance in favor of Brazil been properly studied?

(9) Finally, what article of American produce included in the exemptions or reductions of the new tariff can be pointed out as having been prejudiced by former tariffs?

CONSUL GENERAL DOCKERY'S REPLY.

[Inclosure 2 in Consul-General Dockery's report.]

UNITED STATES CONSULATE-GENERAL,
Rio de Janeiro, March 20, 1891.

Dr. ———

SIR: Yours of a recent date, containing subjects for proposed interview, was duly received, and but for a slight illness, together with a heavy pressure of official business, would have been earlier attended to. It affords me pleasure to accede to your proposition for an expression of my views in regard to the controverted issues involved in connection with the commercial reciprocity treaty recently ratified between the United States of Brazil and the United States of America. It is, however, apparent that some of your interrogatories are manifestly extraneous to the legitimate issues under consideration and partake somewhat, by implication at least, of the bitterness of the contention indulged in by outsiders, who claim a monopoly of all South American enterprises, with the inherent right to control all her interests, yet at the same time unreservedly and undisguisedly proclaiming an innate, inherent, fundamental horror of all her forms of government. This, to say the least, is unneighborly and uncharitable. I had the honor to witness the earliest outburst of public sentiment in November, 1889, which resulted in the peaceable establishment of the Provisional Government under the guidance of her leading republicans and ablest statesmen. Day by day have I been a close and earnest observer of passing events, often, I admit, with anxious solicitude, and at times with fearful forbodings, yet always with hope and the deepest concern. Such incertitude, I am proud to know, is now removed, and yours is a constitutional Government, founded on popular sovereignty, with the people on top and in full command of the reins of power, and who have selected for their first President an honest, intelligent, and patriotic gentleman, who will fill the chair of state with great honor to himself and lasting usefulness to the people of his native land.

It was likewise my pleasure, in the temporary absence of Minister Adams, to cable to my Government the first information of this popular uprising, and in due time, after further correspondence with our legation, instructions were received to "maintain diplomatic relations with the Provisional Government," which was speedily followed with full and unqualified recognition of the new Republic. With a view to more emphatic significance still to this manly act of recognition, the United States Government sent out at once, thousands of miles, three large, new war vessels to salute your flag of the Southern Cross, which so beautifully and aptly emblazons your national ensign.

Amid all this outspoken friendship and heartfelt zeal in your behalf as a people on the part of my Government and other sister republics of the American continent, it is pertinent and of interest to inquire, where were then the countries other than republics who now claim to be the especial guardians of Brazil's interest, financial and commercial? Where were then that sympathy and love so conspicuously proclaimed now? When your liberties were in peril; your claim to the right of local self-government, in accordance with a continental usage, was involved; your very autonomy as a people at stake, why so much cool indifference then, and such excessive, overweening anxiety now in a purely sordid matter of pounds sterling or cool, hard dollars and cents.

Excuse this seeming digression, for it has a purpose, as it fully answers in advance several of your interrogatories as to the animus of the United States Government. Friends then, friends now; *per contra*, indifference then, distrust now.

I shall not undertake to answer your interrogatories fully nor seriatim, but will, in as concise a manner as is consistent with the importance of the issues involved, give you such replies thereto as, I think, should be satisfactory to your Government and people.

Your first inquiry is in its nature insidious and discloses the crafty expedient of the enemies of the treaty. Let me assure you, in reply thereto, that this proposition is not, in the United States, connected with politics; nor is it in any sense a political question, but is cordially supported by the ablest statesmen of both the leading parties; nor is it in its inception a plant of recent growth. The illustrious Clay, the able premier of Mr. Adams's administration, as early as 1826, was the earnest advocate for the convening in Washington of an international congress of all the South American nations with a direct view to closer political and commercial relations. This action of his was nonpolitical and antedated even the formation or existence of the present political parties of the United States. Mr. Blaine, the equally able and distinguished premier of Mr. Garfield's administration, in the early days thereof formulated for the American States a similar policy, but the untimely death of the President for the time being terminated its consideration. Now, in 1891 (55 years after its inception), the same distinguished statesman has, by his active agency and potential influence, consummated this wise and mutually beneficial policy. Hence it can not be political in its significance, and there is "no basis for the suspicion that the treaty has political tendencies." This artful outcry is intended to mislead and to divert attention from the genuine issues. Yet this treaty has "political tendencies" otherwise than domestic and local, as you intimate. The drift of this tendency is patent and undenied, and can be summarized in a few sentences. The truth has never been concealed that there is a desire, strong and growing, among all the sister republics of the American continent to adopt a policy which will eventually free them from a dependence on monarchical Europe, whose interests and governmental policies antagonize our free institutions and induce them to look with dismay on the rapid growth and marvelous prosperity of the United States of America, which has so speedily, easily, and effectually outstripped the older empires of the other continent, not only in population and wealth, but in the intelligence, contentment, happiness, and general well-being of its citizens. Although they do not relish our methods of government, yet they are ever ready to monopolize, if possible, the earnings of our continent and hold us in subserviency by means of the gold, or its equivalent, we furnish them.

All this tender interest suddenly awakened for the people of Brazil is too transparent to swallow with "its barbed hook." The people of this continent will continue with increased zeal to cultivate this "political tendency," regardless of dictation from others, until it culminates in the grandest fruition of modern times—an assured independence from the outside world, political, commercial, and financial. We will continue to insist, on all proper occasions and by all lawful methods, that America must and shall be for the Americans, for we are Americans all.

Your second inquiry, though adroitly worded, is likewise candidly answered. The usages and customs peculiar to each and every nation are and must be carefully considered when propositions for trade or other relations are proposed or opened. This, in the commercial

world, is a rule of universal application, and its necessity and importance are fully recognized by the merchants and manufacturers of the United States as essential if success is to follow the venture. The wants and needs of the people of that great Republic—a country peculiarly favored of Providence; of vast, almost boundless, resources; of every variety of soil and production; of every variation of climate, from the tropics of Florida to the Canada line, upon the frozen lakes, and from the agricultural and manufacturing slope of the Atlantic across the continent, with its varied industries of husbandry, minerals, and utilized water and steam power, to the placid Pacific; with large cities, towns, and villages and a thriving, prosperous energetic, thinking people densely populating this vast area—have hitherto commanded all the energies, untiring and unintermittent, of that peculiarly energetic people. Yet the work is grandly done. Behold the scene, and judge for yourself if such stupendous results, in progress and improvement unprecedented, are compatible with ignorance and indifference. Such astounding achievements speak louder than words an reply, "How can such a people fail to recognize 'the peculiarities of the Brazilian trade?'" Success in this new field of enterprise hinges largely on this point, and you do an injustice when you indirectly impute to us ignorance of these important considerations and craftily ascribe superior sagacity and greater aptitude for business to our great rivals on the other continent. In this movement our Government "means business," as will be "apparent" to the outside world, for no ordinary obstacle impedes its progress.

Your next query is substantially already disposed of. A people who expect, under any circumstances, to sell within the tropics wearing apparel only adapted to cold latitudes or costly raiment to the laboring classes here or elsewhere is more than slightly demented; and among the ten thousand charges brought by others against our people I have not yet heard this specific accusation, nor, be assured, will United States manufacturers undertake "to force upon consumers (here or elsewhere) articles they do not want because these articles are accepted in the States." You pay a very poor compliment to the Brazilian republicans in propounding such a question. Republics may be convinced, but not "forced;" republicans persuaded, but not "coerced." This treaty does not, in any sense, "force" Brazilians to trade with the United States, and, if prices, styles, and terms do not suit, they can withhold their patronage, in which event our competitors abroad—now so terribly excited and so remarkably prolific of surmises and baseless innuendoes—will not be molested and can at pleasure resume their accustomed monopolistic tendencies.

In answer to No. 4, the United States consul-general does not believe that European merchants are disposed or accustomed to sell their wares "on long credits" to irresponsible parties, nor does he believe that any sane merchants or manufacturers would refuse to negotiate with responsible parties. On the latter basis time sales are made in the United States, and money and supplies likewise issued to farmers and planters in the interior for the preparation of the soil, planting, cultivating, gathering, and moving of the crops. If so there, why not, in a short time, here? But, if satisfactory terms can not be made here, who is hurt? Surely not the European importer. Nor is there a disposition to "force" the cash out of your people in payment for such goods as may be sold. This is simply a matter for agreement between the contracting parties and rests solely on mutual consent and business habits. I can see no reason why—nor do I concede such to exist—American merchants can not operate in Brazil on terms equally as favorable to the people as merchants elsewhere. They have the money, the brains, and the energy to compete anywhere and in any field and have never been outstripped in any legitimate business or commendable enterprise.

Your fifth and sixth questions convey pertinent inquiries, which are not only relevant, but true and hurtful. This taunt is now almost daily thrown into my face, and is by me acutely felt and deeply deplored; for I admit its justness, and the records of this consulate-general fully attest my persistent efforts to avert its force. The "commercial traveler," as a business man in the mercantile community in the United States, is a potent factor in the sale of goods, and always an expected and welcome visitor to the tradesmen of the interior. The goods which he sells there by sample can be satisfactorily delivered in a few days at any point, how-

ever remote. Here, however, with such great intervening distance, requiring necessarily such a consumption of time in the transportation of the goods as may endanger the expected profits, because of change in money values, such management of mercantile business is impracticable and can not, in the very nature of things, give satisfaction. Other nations until quite recently pursued the same fatal course and have only changed their basis of operations within a very few years. The merchants and manufacturers of the United States are duly apprised of this grave error and will speedily conform to the required change. It is their duty, and success demands it. Ordinary sagacity and practical, business common sense will soon dispense with the commercial traveler, with his "catalogue" and bundle of samples, and compel the establishment in your different cities of large warehouses, in which "important stocks" will be carried, under the control of "educated staffs of clerks" acquainted with custom-house regulations and the Portuguese language. These houses will be fit representatives of American thrift, enterprise, and push, and will be sustained by American capital, with ample American banking facilities to meet all their necessities and participate, in all legitimate methods, to their full share in the bright future which, we trust, is now dawning on this promising Republic. This course is wise and essential to favorable results, but, if not carried out and failure thereby follows, who is hurt? Certainly not our foreign competitor. Then why complain in advance by befogging the way?

The consul-general does think that Brazil, in adopting a republican form of government, has gotten on the right track and is on the up grade. He is well aware, too, that in some respects it is a "new country" and in great part unimproved, yet growing and susceptible of wonderful development, and that, in view of the close commercial relations between the Republics, the United States of America will gladly furnish the United States of Brazil with such facilities as may be necessary for rapid and continued development, equally as readily and equally as cheaply as has been obtainable from other countries. A common interest—in governmental relationship perhaps a common destiny—clearly indicates such normal results.

In reply to the latter part of this interrogatory, let me assure you that I am proud to inform you that the United States is not in the habit, nor in the condition, of relying on Europe for the payment of her debts. Her bonds command heavy premiums and are eagerly sought for investment by European capitalists. Said bonds, on presentation at the Treasury, at the option of the holder, before maturity, are cashed at a heavy advance on face value. She is dependent in her finances on no outside government, and I resent for her such imputation. The merchants of my country are very exacting in demanding payments of all European buyers for the immense values in national products which they so reluctantly receive and grudgingly buy from them, and they have long since been accustomed to settle balances with Brazil with great facility and within themselves and without complaint.

But enough; these (save Nos. 5 and 6) are superficial and misleading inquiries, and do "but beat the bush" with a shrewd formulation of the many idle and nonsensical charges made for a purpose against my Government. Their intent is patent and of exotic growth, and is incubated in the cold and acrid soil of prejudice and bigotry and must miscarry.

You have not a word to say by way of commendation to my Government, which admits free of duty every leading commodity of Brazilian growth—coffee, hides, and sugar, the two latter in direct competition with similar articles of domestic production, and all free, save the cost of transportation, for the consumption of 63,000,000 people. From this office alone is annually exported to the United States all of $50,000,000 worth of coffee. Two-thirds of the coffee produced in Brazil and two-thirds of the rubber find a market there likewise, and all the hides and all the sugar can also be readily sold there at remunerative prices. Indeed, the sugar crops, with the impetus given its production under this treaty, will fully compensate this Government for the loss of revenue on articles admitted free.

In return therefor the United States Government is authorized to import several articles free of duty, many of which can not be profitably produced here and all of them of prime necessity to your people in the way of food, viz: Agricultural, mechanical, manufacturing, mining, and railroad utensils and machinery, which will result in cheaper and better food for the

masses, and furnish all-important machines for the husbandman, the factory, the mine, and the railroad, all of which is indispensable to that development of which you say Brazil is in so much need and is only admitted to a market of 13,000,000 people.

If there be a sincere and honest desire to ascertain the relative merits of the treaty and properly instruct the masses as to the advantages and disadvantages thereof, the only sensible method is to make a plain statement of the values and classes of Brazilian products exported to the United States and, *per contra*, the value and class of all products exported from the latter country to Brazil. By this means you can ascertain the exact proportion of your citizens who will be benefited by the introduction, free of duty, of articles of prime necessity to the masses. Take the case of the milling interest in Rio de Janeiro alone; there are here two large flouring mills, and a considerable percentage of the wheat used comes from the United States. The names of the owners thereof, with the nationality of each, can be readily ascertained, and then when it becomes known that this outcry comes from some 100 persons, owners of the mills, against cheap flour, and that all of 450,000 human beings are in favor of cheaper food, you can readily see its practical operation. This case alone (and there are many others) shows the proportion in the single article of breadstuffs of 1 to 4,500 for and against this clause.

But, as you failed to indicate a desire for my views on the only practical bearings of this treaty, I will close with the assurance that, whenever invited to discuss this issue on facts and figures and custom-house records, I am at your service.

O. H. DOCKERY,
Consul-General.

STEAM-MADE EMBROIDERIES.

REPORT BY CONSUL BYERS, OF ST. GALL.

The recent invention at Arbon, Switzerland, of a new steam machine for making embroideries threatens to revolutionize the most important manufacturing interests of the Swiss Republic. Eastern Switzerland, with St. Gall as a center, for 100 years has been headquarters of the embroidery industry of the world.

In the year 1890 cotton embroideries to the value of 90,000,000 francs were shipped from St. Gall to various quarters of the earth. More than 40,000,000 francs' worth of these articles were sent to the United States. Should these large importations continue and the American tariff on embroideries remain at the present high rate of 60 per cent., the customs income alone would produce to the United States not less than 24,000,000 francs annually. The invention of a steam embroidery machine that may more than triple the present enormous production of hand machines and produce embroidery of even a better quality than the present is of sufficient importance to attract general attention. To the many thousands of Swiss people who earn their livelihood by hard labor at the hand machine the invention is one of vital interest. To the American who has his eyes open to the advantage of an invention that might, under a high tariff, possibly transfer an enormous industry from the Alps of Switzerland to New York city the situation is also of import. Manufacturers of eastern Switzerland are scarcely awake to the danger that seems to threaten them, though numbers are urging

attention and combined action among themselves. Many, on the other hand, regard the new invention as of little consequence, and are not at all likely to interfere with the regular course of manufacturing by hand machines. It can, in the opinion of such—and many of them are experienced in the trade—never prove a serious competitor of cheap hand labor. Some careful investigation, however, has shown the possibilities of the new machine to be much greater than the friends of hand machines have been willing to concede. The invention is not to be lightly passed over. The French weavers 100 years ago at first ridiculed the invention of the Jacquard silk loom; seeing it a reality, their next act was to try and burn it up and mob the inventor, because it had revolutionized their industry in a night. There is a possibility that the Arbon steam machine may yet do for the embroidery industry what the Jacquard loom did for silk-weaving.

To understand the importance of the situation better, a brief glance at the past history of Swiss embroidery seems requisite. The present hand machine for embroidering was brought into use in 1827. Embroidering by hand alone had long been practiced, but it had only become an organized industry (home industry) early in the present century, and was confined, as now, almost wholly to the mountainous part of eastern Switzerland, that is, the cantons of Appenzell, Thurgau, and St. Gall, with St. Gall town as headquarters for shipping. The technical skill and readiness of hand of the Appenzell women were marvelous, and gradually the exquisite embroidery made by them became famous all over the world. Very many thousands of the people are engaged wholly in the skilled business. Girls were trained to it from early childhood. At that time all the beautiful work was done with the hand and in the people's homes; but the introduction of the hand machine rapidly changed the whole situation. To-day possibly not 5 per cent. of the embroideries are made exclusively by hand, and these only of special articles, fine and expensive. The hand machine was soon in the houses of half the peasants, and factories were founded, where many machines were collected and worked, but still by hand power only. The character of the work was then, and remains now, excellent; but the production was comparatively slow. The profits were usually large to the dealers; but the embroiderer barely made a good living, as it was always necessary for him to pay an assistant, known as the "threader," to help work his machine. This common old embroidering hand machine of 1827, with few improvements, is the one that is used to-day for the millions of fine embroideries that are sold to all quarters of the globe. There are perhaps 23,000 of them in use in eastern Switzerland, the number of needles averaging about 250 to the machine, and the number of stitches not exceeding 2,000 to the needle, daily. As embroiderers are paid on the stitch basis only, and sometimes as low as 4½ cents a hundred, they have very small earnings left after paying their threaders and other expenses. At the present time 50 cents, sometimes less, is a fair average of the daily earnings of a hard-working embroiderer, who must toil a long day with head, hands, and feet, working his machine.

A machine that would increase the number of stitches, and with less labor, has been the effort of inventors for nearly 50 years. Some 15 years ago a machine, called the "Schiffli," was invented and worked by steam. It produces, however, only a low class of goods of inferior quality. The product of this machine is usually known as "Schiffli goods" or "Schiffli embroideries." A little later other and greatly improved steam machines for fine embroidering were invented, but failed to enter into general use, flattering as were their prospects. For 17 years the well-known firm of Laurer Bros., at Arbon, on Lake Constance, have been striving to solve the problem of a rapid, perfect-acting steam embroidery machine that will increase the production, lessen the labor, and even improve the quality of the goods. The firm believe they have accomplished the desired object in their new Arbon machine. The principle upon which the invention proceeds seems to warrant belief in its great success. It is a power machine, but retains some of the ideas of the old hand machine. The short thread is still used, but with a vertical tension, by spring motion, in place of the horizontal moving carriage of the common machine. The needles are all put in place at once by means of a bar that is replaced as often as needed, saving valuable time. The pantograph that moves the frame holding the cloth is moved by steam and follows the pattern by means of an automatic attachment, which takes the place of the trained embroiderer. These are only the general features. A detailed description of the invention is not necessary here, nor would it be understood without drawings. What is claimed for this invention by its owners is that it will at least triple the product of the hand machine; that, hence, it can produce goods cheaper; that it can produce fully as good an article as is produced by the old method, and do it without so much of the wear and tear to the muscles of men and women. It has different improved attachments, such as "Bohrers," steam needle-threaders, automatic pantograph, etc., that aid in the rapid production. The hand machine seldom produces much above 2,000 stitches daily, on an average. The Arbon machines, when placed two together, with the single automatic pantograph acting for both, will, it is claimed, produce 12,000 to 15,000 stitches daily. It requires no rest and can be worked 24, instead of 12, hours. Two hand machines, worked by two men and two girls, may, it is claimed, be forced to produce 5,500 stitches daily; but even then, if the estimates are all correct, the Arbon machine would nearly triple the production, allowing nothing for the advantages of power over hand machines in many other directions. A drawback to the Arbon machine is the expense of its manufacture—5,000 to 7,000 francs—as compared with 2,000 francs and less for the best pattern hand machine. Its tremendous production, too, would indicate its suitableness only for articles that are demanded in immense quantities. It is maintained, however, that this is not an objection, as the machine will produce almost everything in the embroidery line. Of course, no machine ever has, or likely ever will, take the place of hand labor entirely, and so it is with embroideries; certain articles will always require the touch and help of the hand.

The question naturally arises, has this machine an interest for Americans? The answer is, yes; for wherever it may be put in use, here in the Alps or in New York city, there is a possibility of its revolutionizing the whole embroidery business. Could Americans, under any circumstances, with such a machine, secure the bulk of this profitable and historic industry? That depends on the tariff. Were the duty on the embroidery to remain excessively high for the next 10 years, yes. Labor is very cheap in eastern Switzerland—as stated, embroiderers scarcely earn 50 cents a day—but the enormously rapid production of such a machine, sustained by a tremendously high tariff for a very long time, might, perhaps, in the end beat cheap labor in spite of the more than double wages Americans would pay for attendants on the steam machines. Certain articles of embroidery are even now being made in America with some profit. Of course, there are only a few dozen machines there—some 200—as against nearly 30,000 machines abroad, and only a handful of people engaged in embroidering, as against 100,000 in Switzerland alone. But all things must have a beginning, and, though the American people are paying great prices for their embroideries just now, in order that our handful of beginners may get a start, still it is to be hoped that by the introduction of some great machine like this some day the bread cast on the waters will, in a measure, be returned to us. Without some such happening embroidering in the United States, except as to a few specialties, will very likely always be an uphill work. To succeed with embroidering in the United States, there must be a machine or a method that is able to take the place of 100 years of experience, skill, patience, and training that amounts almost to genius, and that can overcome a low scale of wages, such as has never yet been experienced in the United States.

S. H. M. BYERS,
Consul.

UNITED STATES CONSULATE,
St. Gall, June 29, 1891.

MEXICAN EXPORTS.

REPORT BY MINISTER RYAN.

The official tables which I have the honor to herewith transmit, taken from the Diario Oficial of April 10, 1891, show that the total value of the exports of merchandise and precious metals during the first half of the fiscal year 1890–'91 (July to December) from Mexico was $32,216,505.57. It will be seen that of this sum the precious metals amount to $22,048,653.28 and the merchandise to $10,167,852.29. Of the latter the United States took $8,154,126.20, or about 80 per cent. of the total export of merchandise. Of the total exports of precious metals ($22,048,653.28) the shipments to the United States were $13,248,342.69. The net increase of exports of precious metals over the corresponding period of the preceding year was $1,079,638. It will be observed that the increase of silver-ore exports exceeds 25 per cent.

Table showing the total exportation through each custom-house during the first half of the fiscal year 1890-'91.

Custom-houses.	Precious metals.	Merchandise.		Total value of exports.
		Quantity.	Value.	
		Kilogrammes.		
Acapulco	$27,563.50	872,284	$66,079.90	$93,643.40
Altata	17,270.36	662,621	18,662.00	35,932.36
Ascensión	57,820.00	2,800	14,906.00	72,726.00
Camargo	1,950.00	61,836	13,149.83	15,099.83
Campeche	3,300.00	1,962,755	78,969.00	82,269.00
Ciudad Juárez	6,573,601.09	894,953	1,017,313.07	7,590,914.16
Ciudad Porfirio Diaz	768,626.86	24,316,783	630,630.35	1,399,257.21
Coatzacoalcos	.....	4,182,949	42,435.69	42,435.69
Frontera	230.00	2,851,505	72,686.88	72,916.88
Guaymas	323,548.41	60,041	8,335.50	331,883.91
Guerrero	.....	700	812.00	* 812.00
Isla del Carmen	.....	23,068,677	503,614.00	503,614.00
La Paz	364,841.36	963,122	32,283.00	397,124.36
Laredo de Tamaulipas	1,529,290.93	4,016,072	562,607.65	2,091,898.58
Manzanillo	36,200.00	702,931	23,763.80	59,963.80
Matamoros	143,205.65	1,213,499	67,895.10	211,100.75
Mazatlan	2,554,915.86	1,319,956	49,111.00	2,604,026.86
Mier	22,510.00	65,578	18,747.50	41,257.50
Nogales	243,474.27	610,210	38,845.00	282,319.27
Palominas	90,665.19	3,749	28,853.00	119,518.19
Progreso	223,680.20	26,741,303	3,352,223.84	3,575,904.04
Puerto Angel	500.00	7,255	2,653.45	3,153.45
Salina Cruz	24,700.00	44,339	7,204.04	31,904.04
San Blas	105,864.00	492,101	12,045.13	117,909.13
San José del Cabo	.....	458,049	11,061.50	11,061.50
Santa Rosalía	.....	1,275	260.00	260.00
Sásabe	3,150.00	2,797	712.00	3,862.00
Soconusco	33,800.00	114,229	63,042.84	96,842.84
Tampico	159,345.50	4,226,260	363,477.93	522,823.43
Tijuana	570.00	38,572	12,440.00	13,010.00
Todos Santos	65,577.78	70,088	1,695.00	67,272.78
Tonalá	21,628.15	5,544	2,996.05	24,624.20
Tuxpan	.....	5,358,703	883,920.55	883,920.55
Veracruz	8,650,824.17	8,156,127	2,164,419.69	10,815,243.86
Total	22,048,653.28	113,549,763	10,167,852.29	32,216,505.57

Table showing the values of precious metals exported during the first half of the fiscal year 1890-'91, compared with the same period of 1889-'90.

Metals.	1890-'91.	1889-'90.	Increase.	Decrease.
Silver ore	$4,590,408.44	$3,326,316.63	$1,264,091.81	.....
Foreign gold coin	4,844.00	11,625.00	.....	$6,781.00
Mexican gold coin	62,329.00	47,857.00	14,472.00	.....
Gold bullion	266,518.51	194,711.64	71,806.87	.....
Foreign silver coin	11,227.20	83,279.20	.....	72,052.00
Mexican silver coin	13,078,467.10	13,072,610.00	5,857.10	.....
Silver for fluxing	682.00	60.00	722.00	.....
Silver mixed with gold	319,300.27	213,603.56	105,596.71	.....
Silver bullion	3,195,561.30	3,643,959.76	.....	448,398.46
Silver sulphurets	519,315.46	374,892.46	144,423.00	.....
Total	22,048,653.28	20,969,015.25	*1,606,969.46	527,231.46

* Average increase, $1,079,638.

Table showing the exports by articles for the first half of the fiscal years 1889-'90 and 1890-'91, with the increase or decrease in 1890-'91.

Articles.	1890-'91.	1889-'90.	Increase.	Decrease.
Brandies	$11,562.50	$5,935.00	$5,627.50	
Jewels and precious stones	5,313.00	1,840.00	3,473.00	
Live animals	162,928.00	231,541.50		$68,913.50
Indigo	19,378.88	60,196.00		40,817.12
Sugar	455.00	39,225.80		38,770.80
Empty barrels, casks, etc	9,834.50	9,955.00		120.50
Coffee	1,019,066.09	1,317,888.49		298,822.40
Hard coal	85,124.35	91,091.00		5,966.65
Rubber	28,142.65	45,963.15		17,820.50
Horsehair	21,130.51	22,670.94		1,540.43
Copper	1,650.00	156,137.00		154,487.00
Pearl, mother-of-pearl, etc	18,735.00	24,122.74		5,387.74
Hides, wet	10,500.00	8,284.00	2,216.00	
Chewing gum	533,781.99	326,434.99	207,347.00	
Chile peppers	12,678.85	16,860.00		4,181.15
Baggage	8,473.25	6,447.00	2,026.25	
Beans	97,472.49	109,186.54		11,214.05
Fruit	59,566.12	42,457.25	17,108.87	
Chick-peas, etc	31,395.25	84,588.49		53,193.24
Guano		8,025.49		8,025.49
Hemp	3,314,514.88	4,084,480.30		769,965.42
Ixtle	518,338.49	491,938.78	26,399.71	
Wool	30.00	21,894.05		21,864.05
Lemons	48,542.50	41,167.00	7,375.50	
Woods (various kinds)	882,842.15	645,335.90	237,506.25	
Manufactures	8,848.65	7,804.13	1,044.52	
Marble	46,760.00	79,425.46		32,665.46
Refunded merchandise	30,975.50	108,835.65		77,860.15
Bees' honey	26,889.52	37,240.13		10,350.60
Samples	4,659.00	21,031.50		16,372.51
Orchilla	1,351.00	7,145.00		5,794.00
Fine pearls	11,000.00	54,000.00		43,000.00
Hides (various)	715,399.13	854,443.74		139,044.61
Unrefined sugar	4,820.00	7,212.50		2,392.50
Lead	377,344.41	272,439.72	104,904.69	
Jalap (Jalapa purging herb)	47,238.80	257.92	46,980.88	
Grass root	218,186.04	213,539.14	4,646.90	
Empty sacks	3,063.00	10,710.00		7,647.00
Salt	375.00	5,185.00		4,810.00
Cotton seed	200.00	7,871.40		7,671.40
Tobacco	446,655.59	379,365.37	67,290.22	
Wheat	570.00	12,680.00		12,110.00
Vanilla	345,306.00	583,409.46		238,102.46
Valuable papers	910,528.50	116.90	910,411.60	
Sarsaparilla	11,604.75	8,392.52	3,212.23	
Sundry articles unspecified, whose exportation does not exceed $5,000 in the 6 months	54,620.95	78,837.81		24,216.86
Total	10,167,852.29	10,643,909.27	1,647,751.12	2,123,628.10

RÉSUMÉ.

Increase in precious metals	$1,079,638.03
Decrease in merchandise	476,056.98
Net excess of exports	603,581.05

Table showing the exports by countries of merchandise and precious metals during the first half of the fiscal year 1890–'91.

Whither exported.	Precious metals.	Merchandise.		Total value of exports.
		Quantity.	Value.	
		Kilogrammes.		
Germany	$787,111.06	3,846,588	$421,692.83	$1,208,803.89
Colombia	42,804.00	15,308	1,923.63	44,727.63
Costa Rica		72	200.00	200.00
Spain	15,780.10	2,205,613	201,107.07	216,887.17
United States	13,248,342.69	75,348,121	8,154,126.20	21,402,468.89
France	2,136,964.56	4,929,822	373,608.70	2,510,573.26
Guatemala	5,511.15	21,903	4,035.00	9,546.15
Holland		765,421	31,743.41	31,743.41
England	5,811,439.72	26,407,216	978,415.45	6,789,855.17
Italy		9,000	750.00	750.00
San Salvador	700.00	700	250.00	950.00
Total	22,048,653.28	113,549,764	10,167,852.29	32,216,505.57

THOMAS RYAN,
Minister.

UNITED STATES LEGATION,
Mexico, May 1, 1891.

FAILURE OF THE PLATENSE FLOTILLA COMPANY.

REPORT BY CONSUL BAKER, OF BUENOS AYRES.

As one of the proofs of the general collapse which has taken place in the financial and commercial affairs of the Argentine Republic I have to refer to the failure of the Platense Flotilla Company, of Buenos Ayres, a company organized by the shipbuilders and shipowners of the Clyde, Scotland, for the purpose of operating and controlling the river carrying trade of the Argentine Republic, for which purpose it bought up and took over all the companies in the transportation business on the various rivers of the country. It was formed in 1886 and paid £156,671 for the interests of the French Platense Company, £276,420 for the fleet and property of the Lloyd Argentino Company, and £450,000 for the fleet of the Buenos Ayres Messageries Fluviales Company, and then spent upon capital account £242,342, making a total expenditure on that account of £1,121,433, of which £519,150 is represented by shares and £311,490 by debentures, leaving a deficiency of £290,793 to be placed. The loss on working during the first 2 years was £93,356, and the amount of expenses in Buenos Ayres for stores and coals is £95,000, which makes the total deficit £479,140. Of this sum £420,000 was lent to the company by Messrs. William Denny & Bros. and Messrs. P. Henderson & Co., who are the only creditors of the company except the debenture holders. Owing to bad times, the deficiency is likely to go on increasing, because the company is working at a loss; but the two firms

mentioned are not disposed to advance more money or to increase their responsibilities by guaranties.

The net earnings of the company during the first 8 months of 1890 were only £33,880, against £113,039 for the same period of 1889. September produced only £2,000, and the remaining 3 months of the year were expected to show worse results. Moreover, debentures to the amount of £90,000 became due on December 31, 1890, of which only a small portion was renewable. It was hoped that the profits of the business would have supplied current wants, but the revolution here and the stagnation of business since make it impossible for the company to raise any more money. Under these circumstances, the directors have recommended liquidation and the winding up of the concern. The losses to stockholders will be great. The creditors will probably take over the properties and assets.

E. L. BAKER,
Consul.

UNITED STATES CONSULATE,
Buenos Ayres, February 18, 1891.

LEADS IN AUSTRALIA.

REPORT BY CONSUL-GENERAL WALLACE, OF MELBOURNE.

Inquiries in regard to pure white lead (dry and ground in oil), red lead and litharge (dry), lead pipe, and sheet lead have been received, viz:

(1) The quantity of each of the above articles annually imported; (2) the countries from which they are imported; (3) their import value per pound or gallon, freight and duty paid; (4) the import duty on each article; (5) the rate of freight from the exporting countries; (6) the packages (wood or iron) they are imported in; (7) the ports of entry; (8) if sails are made direct to dealers, or by special agents; (9) the usual terms of sale, time given, etc.; (10) the financial responsibility of merchants generally.

These questions require considerable research and inquiry, and to some I can make no reply, but submit the following:

Nos. 1, 2, and 4 are answered in the accompanying tables of imports into this colony, giving countries whence imported, rate of duty, quantity, and invoice value, compiled from the governmental statistics for 1889, the latest published.

For the rates of duty in other colonies, I refer to No. 118 of CONSULAR REPORTS for July, 1890. You will observe no discrimination is made between colors and white lead; but I am informed by the authorities that, generally speaking, "mixed for use" is colors and "ground in oil" is white lead. Dry white and red leads are also imported, but are not tabulated separately.

Nos. 3 and 6 are answered in the wholesale quotations of this (Melbourne) market of April 6 last.

In regard to No. 5, I am informed that the bulk of importations is by charter.

As to No. 7, the ports of entry for the different colonies are as follows: New Zealand, Auckland and Dunedin; Tasmania, Hobart and Launceston; Queensland, Brisbane and Rockhampton; New South Wales, Sydney and Newcastle; Victoria, Melbourne; South Australia, Adelaide; West Australia, Freemantle and Albany.

As to No. 8, sales are made direct and by consignment. Quite a number of American houses in other lines have sent out special agents of their own, who, I understand, have been quite successful.

To No. 9 I could secure no very definite answer, but I am under the impression that many of the houses here are identified, more or less, with firms in England, yet not so much so as to destroy their independence of action. Upon equal terms England would secure the trade. In nearly all of the ports mentioned Americans are established, handling American products. I do not think the financial responsibility of merchants is better anywhere than in Australia.

I understand that there are parties interested in a process, alleged to have been discovered by a Frenchman here, whereby a superior quality of white lead is made direct from the ore. It has been sufficiently developed to secure attention here, and a strong company has been organized to operate it.

I have their promise that at an early date they will give me a full technical description of the process, which, when received, will be communicated to the Department.

Table showing the imports into Victoria for the year ended December 31, 1889.

Articles and whence imported.	Quantity.	Invoice value.	Rate of duty.
Lead:			
Ore—			
New South Wales.....tons...	1	£ 10	Free.
South Australia.....do.....	12	114	Do.
Tasmania.....do.....	1	10	Do.
Pig—			
United Kingdom.....do.....	1,400	18,609	Do.
New South Wales.....do.....	7	102	Do.
Queensland.....	.....	3	Do.
South Australia.....tons...	880	11,317	Do.
Tasmania.....do.....	3	37	Do.
Pipe—			
United Kingdom.....cwts...	29	22	2s. 6d. per cwt.
South Australia.....do.....	8	12	Do.
Hamburg.....do.....	28	28	Do.
Sheet—			
United Kingdom.....do.....	13,600	9,969	Do.
New South Wales.....do.....	30	25	Do.
South Australia.....do.....	40	53	Do.
Linseed oil:			
In pint packages (to July 31)—			
United Kingdom.....dozens...	3	1	1s. per dozen.
New York.....do.....	20	5	Do.
In bulk—			
United Kingdom.....gallons...	436,399	50,145	6d. per gallon.
New South Wales.....do.....	478	71	Do.
South Australia.....do.....	1,867	238	Do.
Tasmania.....do.....	15	3	Do.
Bremen.....do.....	19	5	Do.
Calcutta.....do.....	1,500	175	Do.

Table showing the imports into Victoria for the year ending December 31 1889—Continued.

Articles and whence imported.	Quantity.	Invoice value.	Rate of duty.
Castor oil:			
In pint packages (to July 31)—			
United Kingdom.....dozens...	4,407	£1,596	1s. per dozen.
New South Wales.....do.....	32	11	Do.
Hamburg.....do.....	17	6	Do.
In quart to gallon packages (United Kingdom).....do.....	1	4	12s. per dozen.
In pint and over half-pint packages (after July 31)—			
United Kingdom.....do.....	1,439	495	2s. per dozen.
New South Wales.....do.....	2	2	Do.
In bulk—			
United Kingdom.....gallons...	1,700	319	6d. per gallon.
New South Wales.....do.....	24,188	3,854	Do.
New Zealand.....do.....	4,760	790	Do.
Queensland.....do.....	1,691	274	Do.
South Australia.....do.....	5,942	987	Do.
Calcutta.....do.....	220,669	20,518	Do.
Hamburg.....do.....	57	8	Do.
Venice.....do.....	80	14	Do.
Paints and colors:			
Mixed for use—			
United Kingdom.....cwts...	4,414	8,004	£4 per ton.
New South Wales.....do.....	104	231	Do.
New Zealand.....do.....	20	45	Do.
South Australia.....do.....	3	4	Do.
Tasmania.....do.....	6	13	Do.
Boston.....	.....	2	Do.
Bremen.....cwts...	6	10	Do.
New York.....do.....	39	179	Do.
Ground in oil—			
United Kingdom.....do.....	62,847	78,155	£2 per ton.
New South Wales.....do.....	173	276	Do.
South Australia.....do.....	40	60	Do.
Antwerp.....do.....	19	22	Do.
Boston.....do.....	3	8	Do.
Hamburg.....	.....	1	Do.
New York.....cwts...	13	42	Do.

Table giving the Melbourne quotations on April 6, 1891 (duty paid).

Articles.	Prices.			Articles.	Prices.		
	£	s.	d.		£	s.	d.
Sheet lead:				Castor oil (17-gallon cases)...per gallon...	0	2	11
English.....per ton...	19	10	0	Linseed oil:			
Colonial.....do.....	28	0	0	Boiled—			
Paints (white and red lead):				In drums.....do.....	0	3	7
Champions—				In wood.....do.....	0	3	5
White (in 1-cwt. kegs)...per cwt...	0	30	0	Raw—			
Red (in 28-pound kegs).....do.....	0	25	0	In drums.....do.....	0	3	4
Brandrams—				In wood.....do.....	0	3	1
White (in 1-cwt. kegs).....do.....	0	25	10				
Red (in 28-pound kegs).....do.....	0	25	0				

GEO. H. WALLACE,
Consul-General.

UNITED STATES CONSULATE-GENERAL,
Melbourne, April 14, 1891.

TRADE AND INDUSTRIES OF THE LEEWARD ISLANDS.

REPORT BY CONSUL BRADFORD.

I have the honor to inform you that I have completed the tabular statement of the imports and exports of Antigua and inclose it herewith.*

The imports into Antigua from the United States amount to one-third, and the exports thereto to four-fifths, of the whole trade. As noticed in my report of December 29, 1890, the duties on flour, lard, kerosene, candles, tallow, and tobacco—all from the United States—are very high. I should have much liked to have been able to obtain the exact amount of duties paid on goods shipped from the United States, but was informed that I could not be furnished with this statement.

The leading industry in all of these islands, with the exception of Anguilla and the Virgin Islands, is the growth of cane and the manufacture of sugar, molasses, and rum. Anguilla exports salt and phosphate of lime; the Virgin Islands, a little sugar and some cotton; Montserrat and Dominica, a considerable quantity of lime juice; St. Christopher and Nevis, rum; Antigua, pineapples, sombreros, and phosphates.†

In Antigua the sugar industry is annually increasing in value, but is not by any means what it should be. There are about 16,450 acres under cultivation divided among a little over one hundred estates, but very much of the fertile land lies waste. It is not too much to say that if the resources of the island were fully developed the annual production of sugar would be tripled. At present it exports from 16,000 to 18,000 tons annually. The cane has suffered much from drought this season, and it is thought that not more than half a crop will be produced.

There is no rum manufactured here now, and no reason is assigned for the effacement of this industry except vague remarks that "it did not pay."

The production of pineapples is a thriving industry, and the fruit produced is said to be the finest in the world.

The season of exportation begins about April 15.

A new industry is, however, exciting much interest among the planters in this and the other islands. I refer to the cultivation of fiber, as it is called, for the manufacture of cordage. As I propose, as soon as I can gather the materials, to make a formal report on this subject, I will not refer to it here otherwise than to state that it is far superior to manilla hemp and grows luxuriantly where nothing else will grow.

JNO. S. BRADFORD,
Consul.

UNITED STATES CONSULATE,
Antigua, March 14, 1891.

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* Filed for publication in Commercial Relations.
† The mines are not now worked, however.

LAND TITLES IN THE STATE OF PARA.

TRANSMITTED BY CONSUL KERBEY.

[From A Republica of November 5, 1890.—Translation.]

Before the passage of law No. 601 of September 18, 1850, land-property titles were based principally on first occupancy. Very rare were the persons who, acknowledging the State right of eminent domain to unoccupied lands, petitioned for sections of public lands as homesteads. The titles of these occupied homesteads, in most cases, remained without legal validation, because of the one lacking condition of survey; but it was not declared an offense against the law, because the tracts of land were immense and the cultivators very few.

Any individual would go to a place that suited him, make a clearing, put up a house of the timber of the forest, together with the climbing vines which are to be found in abundance, cover it with the leaves of the ubussú palm or the boughs of the pindoba, weave doors of the same foliage for it, set out four banana plants, and he was considered the proprietor of the soil.

In 1850 came the law No. 601, which in vain strove to do away with this half-savage method of acquiring property. In its second article it established the penalty of 6 months' imprisonment, a fine of 100 milreis, with ejection and loss of improvements, for "squatting" on public lands.

The law above mentioned considered as valid titles by possession anterior to 1850, and ordered that they should be legalized in due form, and also that grants that had not been forfeited should be revalidated. Once more it happened that the definition and declaration of the offense was a dead letter. In the Amazon region, where the vast territory is hardly touched by the hand of man, such threats have no value at all. Forty years have passed since that law was sanctioned, and not a quarter part of the land-property titles in this State are legalized.

This is not, however, the greatest of the evils. The prohibition established by the law was good, because the custom of taking public lands continued, and still continues, to throw land titles into a perfect chaos. The evil to public administration from this source is evident. At least a third of the cultivators of our soil suppose themselves to be possessors, while they are nothing more than illegal holders of the property of the State, liable to ejection and loss of improvements, and, besides, a penalty of 6 months' imprisonment and a fine of 100 milreis.

The poor farmer who is ignorant of the law and its rigorous stipulations would easily purchase his undisturbed quiet by buying the land on which he is settled if there had always been, on the part of the Government, a desire to govern well by making such purchases easy.

Since 1860 the sale of land on credit has been permitted by the law of estimates, and in 1865 the authority to grant such sales was given to the president of the province.

On the 3d of June, 1874, this service was wisely regulated; but the regulation was badly comprehended and worse complied with by the governors. Lands were purchased, and the survey was paid for, cash down; but the surveyors sent to survey the lots were not satisfied with the salary stipulated by the law and arbitrarily exacted enormous amounts for the surveys. The survey was more costly than the land. Hence it came about that the people of the interior, the majority of whom are poor, were constrained to prefer the illegal manner of obtaining land by first occupancy rather than by purchasing it from the State for a small price.

The pernicious influences of this lack of protection for the agricultural classes have made themselves felt on a large scale. The richer people of the interior have often bought up large tracts of land, and, with a provisional title in hand, by means of the survey, from the small farmers they have wrenched the homesteads which they have improved with patient toil for long years. Many families, expelled in such a way, have been rendered homeless.

No attempt has been made to remedy the evils brought upon the people of Para by the ignoring of the obligations resting upon those who govern. The presidents used to take an oath to nurture the welfare of the province for the moral and secular good of the people, but, as a rule, this promise was false.

The farmers, who form the class of society who undertake to furnish the food for the other classes by hard toil, were despoiled of their land by a simple process of survey, because the president of the province had ordered the sale to a potentate of some leagues of land, in which were included many cabins of small farmers, who were ejected with loss of their improvements. Then the law, which ought to have been executed at the time of the irregular acquisition, has appeared in all its strength to throw the poor man out of his little homestead, which he had cleared up and made useful.

These executions of the law have been made without any sort of legal process, because Captain So-and-So, an influential politician of the place, had bought the land from the Government and the latter needed the Captain So-and-So for the elections. Even in these vital interests of the people a bastard politics has made itself felt. During these last 10 years it is that that degrading mode of procedure has been at its height. However, it was not the General Government that was to blame, for it wearied itself in vain giving orders that in the sale preference should be given to the person actually settled on the land; the blame belonged to the provincial government for combining its selfish interests with the local nabobs.

[From A Republica of November 6, 1890.—Translation.]

Now we have reached a new era. The monarchy easily yielded its place to the Republic. The righteous aspirations of the people for a new régime should be satisfied.

We, who are inviting the foreigner to enjoy with us the good things spread around by the Creator in this blessed region, need, more than anything else, to banish the treachery which exists in the matter of land titles. If we put on our statute books rules to give to foreigners secure titles to the soil without first giving it to natives who have already settled on the land, we shall commit the most flagrant injustice.

If the constitutional assembly, inspired by the true interests of the country, restores to the respective States the right of property in their own territory, it will be easy to arrive at this *desideratum*.

A registry should be established for lands already in possession, dividing them into the following classes:

(1) Lands granted prior to 1854 whose titles have been revalidated.

(2) Lands granted prior to the above date whose titles need no revalidation, because of having been surveyed by order of the first concessionaries, or of the land commissioners, immediately after the respective grants were made.

(3) Lands granted prior to the said date whose titles are not yet revalidated, notwithstanding the fact that the conditions of cultivation and residence have been complied with.

(4) Lands whose possession is already legally valid.

(5) Lands which passed into the hands of second owners by legitimate title before the regulation of 1854, and which are not in need of revalidation for legal purposes.

(6) Lands sold by the Government and not yet surveyed.

(7) Lands acquired since 1854 by first occupancy.

In these last two classes it should be declared whether all payments have been made or not.

By this register it will be easy to ascertain:

(1) What property titles are legitimate.

(2) What land-property titles are in need of revalidation.

(3) What land-property titles can not be made valid, except by purchase from the State, by reason of their having been acquired by first occupancy after the express prohibition of this manner of taking possession of the land.

The amount of land in this latter condition is immense, and, as it is solely from this fact that arises the irregularity and confusion in land-property titles, I shall further speak of what to me seems to be the acceptable means for regulating the matter.

[From A Republica of November 7, 1890.—Translation.]

Taking the public registry of lands which are legally or illegally held in the whole State, it will be easy to discriminate them from each other, provided such registers are complete.

The statistics of the lands illegally held being tabulated by districts, these should be surveyed, the State being divided into regions. As these lands are being surveyed, the respective surveyors should remit to the collectors of the districts the certificate of survey of the respective lots, specifying the number of square fathoms (1 braça=2.2 metres) of the area surveyed to be paid for. In the price of the land should be included that of the survey, at 20 reis per linear fathom on all sides of the lot, the possessor being obliged to pay this amount and to furnish the stakes. The Government, authorized by the legislature, should mark the time for completing the payment, provided that the annual installment should not exceed 50 milreis.

The minimum price per square fathom, as is well known, is half a real; therefore, 50 milreis is the price corresponding to 100,000 square fathoms (120 acres). In view of this fact, each holder of lands who has registered an area 1,000 fathoms square* will have to pay the amount of 130 milreis—50 milreis for the land and 80 milreis for the survey.

The amount being paid in annual installments becomes very easy. The collector, having received the note of survey, will make the entry with the designation of the annual installments, as if it were a property tax. In the last year, with the receipt which shows that accounts are square with the treasury, the holder of the land will petition for the title in fee simple, which shall be given to him gratis. This title may serve to proceed to the registry, according to the Torrens law, if the owner so desires. The surveyor should be salaried by the Government to make the measurement in each region.

I believe that in less than 10 years, by this method, the State of Para could have her land titles legalized. But it is necessary that rigor should be used in order to have done with the abuse of any person whatever taking possession of State lands without purchasing them. To this end it will be necessary to facilitate the sales, not placing obstacles in the way of the development of agriculture and the grazing industry with the customary "red tape."

The stability of the population, by the guaranty of the title of the land and the facility of the means of subsistence, will bring marriages and with these the increase of a moralized and happy population. If the people become impressed with the necessity of becoming fixed on the land which belongs to them, we shall in a short time have true progress. We possess plants of great value, which it is necessary to cultivate in order not to lose them. They are so valuable that a small proprietor, by planting them according to his own ability, will in a few years obtain a competence, which will never come to the nomad who runs after the shadow, leaving the reality. The greater part of the population in some of our districts live in a continual flux and reflux, in search of productions which nature still offers spontaneously; and for this reason Para, whose fertility knows no equal, has not the prosperity of Pernambuco, which lives from agriculture.

The rubber-gatherer is badly fed, because he continually eats the dried meat and salt fish with mandioca meal which his employer brings to him from the city. The population is decimated in the rubber swamps, where they are also brutalized and demoralized. The rub-

*The author has made a mistake in supposing that an area of 100,000 square fathoms is 1,000 fathoms square, that is, a square each side of which measures 1,000 fathoms. The area of such a square would be 1,000,000 square fathoms, or ten times as much as could be bought for 50 milreis. The perimeter of a lot of 100,000 square fathoms, 200 wide and 500 long, would be 1,400 fathoms, and its survey would cost but 28 milreis, instead of 80 milreis; making the price of the 120 acres a total of 78 milreis, instead of 130 milreis.—J. O. K.

ber trees generally grow on the low lands; therefore, fevers gather a heavy harvest from among the laborers. The means for avoiding this annual hecatomb in the rubber forests have not yet been studied. Not only many people go there to meet their death, but also their own financial ruin and that of others by the waste or loss of capital which they have promised to pay for with their labor. This is one of the sources of the disastrous crises through which our trade is constantly passing. It is necessary, therefore, to fix the population upon the soil; it is urgently necessary to foster the planting of the rubber tree in appropriate places on the margins of the great rivers and planting along with it the cacao tree. The eternal objection raised is that the rubber tree does not produce abundant milk until after a long time of growth. Although this be true, the idea should not be abandoned. It would be unspeakable selfishness to disinherit the future only because the present has no certainty of profit.

I also think proper that the process of legalizing possession and of the revalidation of grants should be simplified. If the lands come to belong to the States, the local magistracy should be competent to judge of the legalization; but if the lands belong to the Union, I think that only the federal judge ought to have this authority, and not the governor of the State. The contrary would be opposed to all the principles of federation. In any case, the surveyors of the respective regions should have authority to formulate the case which the respective judge has to decide.

It is quite expedient that others more versed than I in these matters should express their views upon this subject, in order to secure measures competent for the urgent demand of the present situation.

CONSELHEIRO PAES DE ANDRADE.

SHEEP AND WOOL IN AUSTRALASIA.

REPORT BY CONSUL-GENERAL WALLACE, OF MELBOURNE.

There are here seven colonies, some of very recent independent political organization, disassociated and antagonistic (in a statistical sense), so that there is no uniform method of securing data. The official census of 1881 is the latest official publication; since then the annual statistics are the estimates of the stock inspectors. By these estimates, the number of sheep in Australasia December 31, 1890, was about 109,167,625; but it is presumed in making them that there has been little or no change in the number in the colonies of New Zealand, Tasmania, Victoria, South Australia, or West Australia, the increase having been in Queensland and New South Wales, and I inclose progress reports from the stock inspectors of the two latter colonies. The figures are as follows:

Colony.	Number.	Colony.	Number.
Victoria	10,882,231	Tasmania	1,551,429
New South Wales	55,477,404	New Zealand	15,503,263
Queensland	17,000,000	Total	109,167,625
South Australia	6,386,617		
West Australia	2,366,681		

The two firms of wool-dealers, Messrs. Goldsbrough, Mort & Co. and Messrs. Dalgety & Co., make a specialty of wool and sheep statistics. They show much enterprise and care in their annual reports, and I believe their

figures may be taken as approximately correct. They give the production of wool in bales, and bales vary greatly in weight; but the total weight of Australian wool sold in London is given by the authorities there as 418,702,000 pounds and the number of bales as 1,226,172, which gives an average of 342 pounds to the bale. Applying this average to the number of bales estimated by them as the clip for the season of 1890–'91, viz, 1,600,000, we have the enormous amount of 545,600,000 pounds as last year's wool production in Australia.

The official census of the British Empire was taken last month, and particular care was taken in these colonies to secure reliable figures as to the total number of sheep. These tables, however, will not be compiled for some time to come.

GEO. H. WALLACE,
Consul.

UNITED STATES CONSULATE,
Melbourne, June 10, 1891.

THE INSPECTOR OF QUEENSLAND TO CONSUL-GENERAL WALLACE.

[Inclosure 1 in Consul-General Wallace's report.]

OFFICE OF CHIEF INSPECTOR OF STOCK,
Brisbane, June 5, 1891.

SIR: Mr. E. Jewett has asked me to forward to you the number of sheep now in Queensland. I have much pleasure in complying with the request.

My returns are still incomplete, but, as they are, they give the number at a fraction short of 17,000,000, or an increase of 20 per cent. over last year. Since the date of the returns, January 1, there have been heavy lambings in some districts, so that 17,000,000 may be accepted as a fair estimate. The number of cattle exceeds 5,000,000.

I have, etc.,

P. P. GORDON,
Chief Inspector of Stock.

PROGRESS STOCK RETURNS FOR NEW SOUTH WALES ON DECEMBER 31, 1890.

[Inclosure 2 in Consul-General Wallace's report.]

These returns are compiled principally from returns received, and partly from the inspector's estimates of the returns of stock for 1890, and show the increase of stock as compared with the previous year.

Table showing stock returns.

Description.	Horses.	Cattle.	Sheep.
	Number.	*Number.*	*Number.*
Stock returned	430,277	1,845,306	54,391,146
Estimate of stock not yet returned	14,226	47,657	1,086,258
Total on January 1, 1891	444,503	1,892,963	55,477,404
Total as per annual report on January 1, 1890	430,777	1,741,592	50,106,768
Increase	13,726	151,371	5,370,636

AUSTRALIAN SHEEP AND WOOL STATISTICS.

[Inclosure 3 in Consul-General Wallace's report.—From Dalgety & Co.'s Review for 1890–'91.]

Table showing the Australasian wool exports from 1881–'82 to 1889–'90.

Colony.	1881–'82.	1882–'83.	1883–'84.	1884–'85.	1885–'86.
	Bales.	*Bales.*	*Bales.*	*Bales.*	*Bales.*
Victoria	338,861	313,318	331,552	329,911	315,650
New South Wales	239,773	264,721	317,804	293,296	346,145
Queensland	53,128	53,637	74,849	73,092	72,717
South Australia	149,485	150,118	120,870	152,387	130,924
West Australia	10,921	10,978	12,634	14,548	14,343
Tasmania	20,477	20,718	18,899	17,268	16,435
New Zealand	194,056	215,472	226,984	232,100	244,617
Total	1,006,701	1,028,962	1,103,592	1,112,602	1,140,831
Increase over previous year		22,261	74,630	9,010	28,229

Colony.	1886–'87.	1887–'88.	1888–'89.	1889–'90.
	Bales.	*Bales.*	*Bales.*	*Bales.*
Victoria	331,998	347,869	352,982	425,928
New South Wales	332,961	397,271	453,601	472,734
Queensland	65,305	88,808	106,222	104,309
South Australia	148,120	150,027	133,139	148,417
West Australia	16,373	16,438	21,881	23,999
Tasmania	17,621	16,657	19,536	19,251
New Zealand	271,895	256,419	267,289	279,950
Total	1,184,273	1,273,489	1,354,650	1,474,588
Increase over previous year	43,442	89,216	81,161	119,938

The total increase between 1881–'82 and 1889–'90 has been 467,887 bales, or an average for the 8 years of 58,486 bales.

At the end of February it usually becomes possible to form some estimate of the probable total production of wool for the current season as compared with the previous one. The past season has, however, been an exception to a good many rules, and especially so in this respect. We have therefore delayed issuing our annual review until something definite could be known regarding the probable production for the past season. The unfortunate labor disputes of last year delayed shearing in many districts, and also retarded the arrival of the clip at the seaboard. The consequence has been that even as late as the end of November a heavy decrease in the exports to date of 123,000 bales was shown, which gave rise to a very general—though ill-founded—impression that there would be hardly any final increase. In the face, however, of very heavy shipments during the succeeding 5 months, it has become evident that there will be an important increase.

The final export figures for the wool season 1890–'91 will not, of course, be made up until after the end of June.

The following table, however, shows the exports from the seven Australasian colonies from July 1 last to the end of last month, compared with those for the corresponding period of 1889–'90:

Table showing the Australasian wool exports in 1889–'90 and 1890–'91 (July 1 to April 30).

Colony.	1889–'90.	1890–'91.	Increase.	Decrease.
	Bales.	*Bales.*	*Bales.*	*Bales.*
Victoria	418,918	408,193	.....	10,725
New South Wales	461,208	546,912	85,704	.....
Queensland	93,381	112,801	19,420	.....
South Australia	147,614	153,552	5,938	.....
West Australia	23,999	29,460	5,461	.....
Tasmania	19,251	20,155	904	.....
New Zealand	264,161	293,556	29,395	.....
Total	1,428,532	1,564,629	136,097	.....

Table showing the number of sheep in Australasia from 1879 to 1889.

Colony.	1879.	1880.	1881.	1882.	1883.	1884.
Victoria	8,651,775	10,360,285	10,267,265	10,174,246	10,739,021	10,637,412
New South Wales	30,062,910	35,398,121	36,591,946	36,114,814	37,915,510	31,660,321
Queensland	6,083,034	6,935,967	8,292,883	12,043,893	11,507,475	9,308,911
South Australia	6,140,396	6,463,897	6,810,856	6,388,366	6,677,067	6,696,406
West Australia	1,109,860	1,231,717	1,267,912	1,259,797	1,315,155	1,547,061
Total Australia	52,047,975	60,389,987	63,230,862	65,981,116	68,154,228	59,850,111
Tasmania	1,835,970	1,783,611	1,847,479	1,845,455	1,831,069	1,720,027
New Zealand*	12,985,085	12,985,085	12,985,085	13,384,075	14,056,266	16,677,445
Total Australasia	66,869,030	75,158,683	78,063,426	81,210,646	84,041,563	78,247,583
Increase over previous year	.....	8,289,653	2,904,743	3,147,220	2,830,917	†5,793,980

Colony.	1885.	1886.	1887.	1888.	1889.
Victoria	10,681,837	10,700,403	10,623,985	10,818,575	10,882,231
New South Wales	37,820,906	39,169,304	46,965,152	46,503,469	50,106,768
Queensland	8,994,322	9,690,445	12,926,158	13,444,005	14,470,095
South Australia	6,696,406	6,696,406	7,254,000	7,150,000	6,386,617
West Australia	1,702,719	1,809,071	1,909,940	2,112,393	2,366,681
Total Australia	65,896,190	68,065,629	79,679,235	80,028,442	84,212,392
Tasmania	1,648,627	1,609,046	1,547,242	1,430,065	1,551,429
New Zealand*	15,174,263	15,155,626	15,042,198	15,423,328	15,503,263
Total Australasia	82,719,080	84,830,301	96,268,675	96,881,835	101,267,084
Increase over previous year	4,471,497	2,111,221	11,438,374	613,160	4,386,249

*The New Zealand figures are up to 31st of May of each following year. No New Zealand figures for 1880 and 1881 being available, those for 1879 are repeated. No South Australian figures for 1885 and 1886 being available, those for 1884 are repeated.

†Decrease.

AUSTRALASIAN AND RIVER PLATE WOOL STATISTICS.

[Inclosure 4 in Consul-General Wallace's report.—From Goldsbrough, Mort & Co.'s Review.]

Table showing the importations of colonial and foreign wool into the United Kingdom from 1877 to 1890.

Colony.	1877.	1878.	1879.	1880.	1881.
Victoria	334,397	302,508	309,614	306,817	355,524
New South Wales	148,322	137,540	154,409	193,363	206,226
Queensland	35,289	38,101	34,502	31,414	39,362
South Australia	107,470	104,808	111,190	109,917	112,827
West Australia	8,186	8,132	8,369	9,211	11,217
Tasmania	21,550	21,287	24,263	23,653	23,826
New Zealand	169,795	178,546	184,877	189,441	182,907
Total Australasian	825,009	790,922	827,224	863,816	931,889
Cape and Natal	169,291	160,263	176,145	193,528	194,133
Total colonial	994,300	951,185	1,003,369	1,057,344	1,126,022
Foreign	314,684	309,271	320,764	430,151	270,370
Total import	1,308,984	1,260,456	1,324,133	1,487,495	1,396,392

Colony.	1882.	1883.	1884.	1885.	1886.
Victoria	364,041	336,518	358,228	317,152	360,731
New South Wales	230,284	234,659	241,277	217,119	265,181
Queensland	54,093	60,858	99,974	104,361	84,065
South Australia	122,167	108,487	118,357	115,108	130,628
West Australia	11,615	11,208	13,204	14,427	16,862
Tasmania	23,429	24,038	24,415	21,681	21,463
New Zealand	194,102	215,024	228,900	237,875	260,912
Total Australasian	999,731	990,792	1,084,355	1,027,723	1,139,842
Cape and Natal	191,113	187,368	189,377	182,168	227,289
Total colonial	1,190,844	1,178,160	1,273,732	1,209,891	1,367,131
Foreign	362,527	310,300	385,871	359,826	452,051
Total import	1,553,371	1,488,460	1,659,603	1,569,717	1,819,182

Colony.	1887.	1888.	1889.	1890.
Victoria	345,396	380,330	372,057	365,172
New South Wales	245,290	321,154	306,091	274,448
Queensland	106,614	122,867	126,637	144,093
South Australia	106,403	115,849	111,236	98,249
West Australia	17,656	19,382	22,897	27,949
Tasmania	22,261	20,167	22,035	23,537
New Zealand	272,918	265,684	277,726	292,724
Total Australasian	1,116,538	1,245,433	1,238,679	1,226,172
Cape and Natal	234,728	288,910	287,334	283,494
Total colonial	1,351,266	1,534,343	1,526,013	1,509,666
Foreign	462,044	468,617	565,881	432,220
Total import	1,813,310	2,002,960	2,091,894	1,941,886

As the production of the River Plate is of some importance to the Australian clip, we append the figures for the past 13 years, and must add that it is estimated that the production for the present year will show an increase of some 30,000 bales.

Table showing the River Plate wool supplies from 1878 to 1890.

Year.	Total quantity.	Increase over previous year.	Decrease from previous year.
	Bales.	*Bales.*	*Bales.*
1878	286,000	.....	7,000
1879	270,000	.....	16,000
1880	289,000	19,000	.....
1881	282,000	.....	7,000
1882	344,000	62,000	.....
1883	350,000	6,000	.....
1884	365,000	15,000	.....
1885	402,000	37,000	.....
1886	382,000	.....	20,000
1887	342,000	.....	40,000
1888	374,000	32,000	.....
1889	421,000	47,000	.....
1890	317,000	.....	104,000

The following table, compiled by Messrs. Helmuth, Schwartze & Co., shows the proportions of greasy, washed, and scoured River Plate wool catalogued in London:

Description	1876.	1887.	1888.	1889.	1890.
	Bales.	*Bales.*	*Bales.*	*Bales.*	*Bales.*
Greasy	387,000	704,000	817,000	794,000	744,000
Fleece	238,000	45,000	33,000	25,000	34,000
Scoured	157,000	354,000	310,000	292,000	305,000
Total	782,000	1,103,000	1,160,000	1,111,000	1,083,000
Australian crossbred	49,000	62,000	56,000	54,000	51,000
New Zealand crossbred	53,000	168,000	172,000	182,000	185,000
Total crossbred *	102,000	230,000	228,000	236,000	236,000
	Per cent.	*Per cent.*	*Per cent.*	*Per cent.*	*Per cent.*
Percentage of fleece washed to total	30½	4	3	2¼	3
Percentage of crossbred to total	13	20	19½	21¼	21¾

* Excluding Swan River wools.

ITALIAN-AMERICAN EXPOSITION IN GENOA.

REPORT BY CONSUL FLETCHER.

For 2 years the municipal government and certain gentlemen of public spirit in Genoa have been diligently at work to overcome natural obstacles and to raise funds in order to celebrate the fourteenth centennial of the discovery of America by the great Genoese navigator Columbus.

The persistency and energy with which this work has been and is being carried out is worthy of all praise, and I now take pleasure in announcing to the Department that many festivities will be inaugurated here next year, each one an attraction in itself; and to crown all there will also be held in

Genoa, in 1892, an Italian-American exposition, to which the King has consented to give his patronage, and over which he allows the use of his name as its honorary president.

The whole programme for the festivities next year is an attractive one; it includes certain features that have not been, and could not have been, given in former exhibitions. It is as follows:

(1) The new opera "Columbus." This is to be presented in the Carlo Felice Theater in this city, the third largest theater in Italy. The opera is now being composed by Maestro Baron Franchetti, for which he has received 200,000 lire. It will be continued during the exposition.

(2) Monuments to General Garibaldi and to the late Duke of Galliera, to be erected and unveiled next year. Garibaldi's name and fame are, of course, known all over the world, whilst that of the Duke of Galliera is limited to Italy and France. The Genoese hold in loving memory the nobleman who planned their grand new harbor and who gave the princely sum of 20,000,000 lire towards the construction of the new breakwater which to-day protects the port of Genoa.

(3) A Columbian museum in Columbus's old home. It is known by records in the municipality that Columbus's father purchased No. 37 Vico dritto di Ponticello, near the Porto San Andrea, in 1457. The conclusion is therefore drawn that within those paternal walls the great navigator spent his early youth. The house is to be restored to its primitive state and a Columbian museum placed therein. This alone will be a great attraction to Americans, both North and South.

(4) An archæological and fine arts museum. Genoa, rich in story and in antiquities, and nearly as old as the rock-ribbed mountains which surround her on three sides, never has had, strictly speaking, an archæological and fine arts museum. The people have long wished for such an institution. Their wishes will be gratified next year, through the thoughtfulness of the late Duchess of Galliera, who died in Paris the fore part of December, 1888. This noble lady, who caused to be erected those fine hospitals at a point in Genoa called Carignano at a cost of 7,500,000 lire, and who afterwards presented them to the city, donated also to the municipality that magnificent structure known to tourists as the Red Palace. The duchess's gifts did not end here. When her will, dated March 20, 1884, was opened and read, it was found that she had donated to the city of her birth her valuable collection of paintings, statuary, and many other articles of rare value. Some of the paintings are by Reubens and Van Dyke. In the same will the municipality fell heir to what is well known here as the White Palace, with the sole proviso that the main floor therein should be devoted to an exposition of fine arts. The grand Municipal Palace, where the relics relating to Columbus are deposited, and the aforesaid White Palace stand side by side and the Red Palace directly opposite both, separated only by Via Garibaldi. Next year will see all three united by a fine arch and gallery, and within their spacious walls will be exhibited not only the rare gifts presented by the late

duchess, but also precious relics of past centuries belonging to the Genoese nobility and to the municipality. Among the relics in the Municipal Palace is a bronze tablet bearing date of 290 B. C. On this tablet is an inscription which Mr. E. A. Le Mesurier, the author of an interesting little volume entitled "Genoa, Her History as Written in Her Buildings," translates as follows: "Two jurists, Q. M. Minutius and Q. F. Rufus, were sent from Rome to settle a dispute as to the boundaries between Genoa and her neighbors."

(5) Martime exposition. The plans for this exposition are taken from studies of the Liverpool and Edinburgh affairs of 1886, Havre in 1887, and of Cadiz and Glasgow in 1888. The space selected for its erection is larger than the space occupied by any one of the exhibitions above named. The Italian Chamber of Commerce in Paris and all the Italian consuls abroad have given assurance that the countries in which they are at present residing will take active part in the one to be held in Genoa in honor of "the great man who gave such strong impulse to maritime arts."

(6) Historical, geographical, and maritime congress. The simple fact that Senator the Marquis Doria, president of the geographical society and present mayor of Genoa, is earnestly engaged in the effort to bring together persons well known in the field of such studies is sufficient evidence that the congress will be well represented by noted scholars of all nationalities. A special committee is now in communication with members of the three congresses lately held at Antwerp, Brussels, and Paris, and many favorable replies have already been received from those learned men. His excellency the prefect of the province of Genoa, another fine student in all learned branches, is president of the provincial committee. The municipal government assumes the responsibility of meeting all obligations for carrying out the above programme.

(7) The Italian-American exposition. This enterprise is in the hands of gentlemen of great energy and perseverance. On account of the limited tract of land which can be devoted to the purpose, say from 60 to 80 acres, the exhibits must be limited to samples rather than to a general display of Italian-American products. That this tract of land was procured at all is the wonder of the Genoese to-day. It was a battle against natural and artificial obstructions by determined men; the latter won. A brief review of the case may not be out of place here. Baron Andrea Podesta, when mayor of Genoa, proposed the scheme, including a portion of the programme above given. Such gentlemen as ex-Minister of Industry Senator Stefano Castagnola, the Marquis Gioeomo Doria, Professor Virgilio, and the Hon. E. Cravero, with other public-spirited men, instantly grasped the situation and immediately argued the subject in public. The people (the Genoese are a cautious, conservative body) looked upon such an undertaking as wild and chimerical. "Where," they asked, "within this narrow space between mountains and sea, can a site be obtained on which to erect an exposition in honor of Genoa's noble son, whom we deridingly called 'mad boy' when

he was among us nearly 400 years ago? Have we not for centuries, been hewing down the rock-ribbed mountains which surround us on three sides, and have we not been robbing the Mediterranean of a portion of its bed on the remaining (front) side for many years? And still we are crowded for space to transact our every-day business." "The Government can be persuaded to come to our assistance," answered the gentlemen named above. "How?" "By granting us permission to raze the Fronti Bassi (ramparts), which extend from the mouth of the River Bisagno to and by the Porto Pita and beyond the Porto Romano." A petition was sent to Rome, the prayer of the men of will and grit was granted, and the King of Italy has accepted the title of honorary president of the exposition. The demolition of the ramparts immediately followed the royal permission, and the Fronti Bassi, which had been such a strong rear guard to Genoa for ages, are leveled to the ground or nearly so. The entire work will be completed in a few months, and on this reclaimed land the exposition buildings will be erected. To the deep grief of all who had the honor of his acquaintance, Professor Virgilio, active president of the enterprise, died of typhoid fever last March after a short illness, and since this sad event Hon. E. Cravero, vice president, has been doing the work of a dozen men in the interest of the exposition. Under date of May 23 last the chief officer in this consulate received a letter from Signor Cravero, extracts from which I beg here to quote:

For the recurrence of the fourth centennial of the discovery of the New World a committee was chosen in this city to institute an Italian-American exposition, with the special object of giving the utmost possible development to the traffic between Italy and the two Americas, and thus increase the friendly and business relations between the two populations. All the efforts to such important results will be unsuccessful unless strongly supported by the American governments. To accomplish this object the said committee has decided to invite the above governments to take an official part in the projected exposition.

The committee is in hope that the Republic of the United States will respond to the invitation and take part in the solemnization of one of the most memorable dates of modern story.

Accompanying the letter from which the above extracts are taken was a paper setting forth all particulars relating to the American section, from which I copy:

DISPOSITION OF THE AMERICAS.

(1) [A repetition of the first paragraph of Mr. Cravero's letter.]

(2) The projected exposition will be divided into two sections, Italian and American. It will include the soil, industrial, and artistic products, as provided for in special programme and within the limits of the special character of the exposition.

(3) The American governments who wish to take part in said exposition are requested to communicate their consent to the committee through their respective consuls.

(4) All American governments who agree to take part in this enterprise will be allowed, gratis, a portion of land on which to erect kiosks, pavilions, galleries, or other structures.

(5) It will be permitted to said governments, as far as concerns their own exhibits, to have paragraph 2 of the programme modified in any manner they choose, according to their special wants and requirements.

(6) They are quite free to select any plan they choose for the buildings they may erect within the limit of land allowed to each country.

(7) In case any of the American governments do not care to erect special buildings, they can occupy a space in certain pavilions measuring about 500 square metres, which will be erected for such purposes, each exhibitor or country to have a separate front and access.

(8) The cost of each space above mentioned will be about 15,000 lire, or, in round numbers, about $3,000.

(9) American exporters belonging to those states who do not care to provide special buildings nor to ask for the concession of special space according to paragraphs 4 and 7 will be allowed for their exhibits, upon application to the committee, space on the same conditions as those imposed on Italian exhibitors.

(10) Ten lire per square metre will be the tax for the space referred to in the preceding article.

(11) The committee further binds itself to obtain, formally, the temporary introduction of the products of American exhibitors free of Government and municipal duty.

(12) For the acceptance and selection of exhibits the American governments are at liberty to charge either the appointed commissioners, under the honorary presidency of the respective consuls, with the task or to provide in any other way they deem best.

(13) The present rules are applicable, also, to all European governments who have possessions in America and who desire to expose the products of their colonies.

(14) A jury will be chosen later on whose duty it will be to award prizes.

The contents of this dispatch would have been forwarded to the Department soon after the receipt of Mr. Cravero's letter dated May 23, 1891, but for the fact that I requested a drawing or an illustrated plan of the proposed exposition. Under date of June 16 my request was granted. The drawing was accompanied by another letter from the vice president, a translated copy of which I present as follows:

While I have the honor to remit to you a phototype copy of the general plan of the Italian-American exposition, I beg to add the following remarks and suggestions for the better understanding of the same and for your guidance:

(1) The space to be allowed to the American section, according to No. 4 of the disposition rules, is that included in each space between the several buildings, as well as those numbered 4, 9, 10, 11, 12, 18, 19, 24, 25, 27, and 28 in the drawing.

(2) The building No. 21, intended for the special divisions, as stated under No. 7 in the aforesaid rules, is a provisionary one, and subject to be modified according to circumstances and to the number of exhibitors.

(3) In order to facilitate the concourse of the governments willing to exhibit, and who would like to have special and separate pavilions, etc., the committee will prepare for them special drawings of galleries, kiosks, etc., and the cost of each. They will also undertake, after the plans are approved, to attend to the construction of said buildings.

Architects and builders here have given estimates of the cost of the proposed buildings, and are ready to enter into contract with the committee for the erection of the same and to give bonds that the entire work will be completed in 6 months from the date the contract is awarded them.

(8) Religious festivities. Last winter the Pope received a petition asking for the canonization of Columbus. The document contained nine hundred signatures. The names of archbishops and bishops in all parts of the world were on the list. The religious festivities to be held here are so clearly set forth by His Holiness Leo XIII that, instead of any comments of mine

on the subject, I attach hereto the Holy Father's letter to the archbishop of Genoa anent said celebration:

To Our Venerable Brother Salvator, Archbishop of Genoa:

Health and apostolic benediction. It is pleasing to us to learn from your letter of January 4 that you are laboring with diligent zeal to prepare, for the coming year, at Genoa, solemn secular festivities in celebration of the memorable voyage by which Christopher Columbus succeeded, four centuries ago, in discovering previously unknown regions on the other side of the globe.

Assuredly it is above all fitting that the honor which many are eager to render to this immortal genius in other places should be paid to him in the city in which he was born and to which he is a distinguished ornament and honor. We therefore highly approve of your design of establishing a council of chosen citizens to see to the carrying out of this intention, and we have read with great satisfaction the pastoral letter which you have, with that view, addressed to the clergy and laity of the diocese over which you preside. But your prudence and piety are principally manifested in your earnest anxiety that the celebration and the rejoicings should be of a character in keeping with Columbus's undertaking, his disposition, and the spirit by which he was animated; for it is attested by the most undoubted historical monuments that he entered on his arduous undertaking in order that the light of the gospel might be shed on those distant shores, and he became in some measure a minister of Christ, who said to his disciples, "Go throughout the world and preach the gospel to every creature." Hence injury would be done to the memory and the name of this excellent man by anyone who would only recognize the worldly aspect of his undertaking, and who would tender to Columbus merely the honors to be awarded to those who take no thought of the Catholic faith and in their great deeds seek to gain alone praise for ability and constancy.

The religious feeling and wisdom by which the people of your Liguria and the other Italians are distinguished being well known to us, we doubt not that it will be understood by many that you have provided in the best way for honoring the memory of such a remarkable man, and that they will spontaneously and heartily support and aid the council of worthy citizens established by you.

We sincerely trust that through this celebration, and through the effect of the example set by Columbus, the zeal of many will be stimulated, so that each shall do all that is in his power to extend the kingdom of Christ on earth.

Meanwhile, for the aforesaid design we implore the Divine assistance, and to this end we affectionately impart the apostolic benediction to you, venerable brother, and to the clergy and people confided to your care.

Given at St. Peter's, Rome, on the 10th of January, 1891, the thirteenth year of our pontificate.

LEO XIII,
Pope.

This concludes the general programme. I have considered it best to thus give in detail all the attractions set forth by the municipal authorities and by the exposition committee, that the Department may understand all points connected with the festivities to be held in Genoa in 1892 in loving memory of the discoverer of the New World.

The Genoese are extremely anxious that the United States should take official part in this celebration. American exhibitors will find no difficulty in transporting their wares to Genoa, for there is direct freight communication between New York and the port of Genoa. The Anchor line, Phelps Brothers, and the Florio Rubattino (Italian) steamers have frequent sailings between the ports just named.

The heat of summer should not deter exhibitors from coming here. It is never excessively hot on the Ligurian coast. For visitors who would prefer the quietness of the country to the hustle of the city comfortable accommodations can be procured within 20 minutes' ride from Genoa.

JAMES FLETCHER,
Consul.

UNITED STATES CONSULATE,
Genoa, June 30, 1891.

CLASSIFICATION OF PRODUCTS IN THE ITALIAN-AMERICAN EXHIBITION, GENOA, 1892.

[Inclosure in Consul Fletcher's report.]

FIRST DIVISION—MINING INDUSTRY.

Section 1.—Products of mines and quarries: Asphaltum and bitumen, alabaster, marbles, lithographic stones, coal, plumbago, iron, copper, lead, manganese, etc.

Section 2.—Raw and manufactured materials: Asbetos, iron, bronze, brass, bells, statues, etc.

SECOND DIVISION—CHEMICAL AND PHARMACEUTICAL INDUSTRIES.

Section 1.—Chemical products: Alcohol, acids, and, in general, all kinds of chemical and pharmaceutical products.

Section 2.—Drugs, albumen, glue, colors, tartaric and citric acids, perfumery, candles, soaps, etc.

THIRD DIVISION—ARTICLES OF FOOD AND PRODUCTS OF THE SOIL.

Section 1.—Dried fruits, preserved fruits and vegetables, fresh fruits, seeds, bulbs, plants, etc.

Section 2.—Breadstuffs and preparations thereof, cereals, fodder, flour, hominy, macaroni, spaghetti, etc.

Section 3.—Greases, butter, cheese, oils, lard, salt meats, salmon, tunny fish, eels, canned oysters, extracts, and pulp of tomatoes.

Section 4.—Sugar, honey, wax, chocolate, pastry, and confectionery.

FOURTH DIVISION—WINES, LIQUORS, AND BEVERAGES OF ALL KINDS.

Section 1.—Wines (white and red), sparkling wines, and vinegar.

Section 2.—Vermouth, bitters, sirups, cordials, essences, beer, mineral waters, aërated waters, etc.

FIFTH DIVISION—ARTS AND INDUSTRIES.

Section 1.—Hemp, linen, buckwheat, horsehair, silk (raw), cotton (raw).

Section 2.—Manufactures of silk, cotton, flax, wool, and velvet.

Section 3.—Mercery, trimmings, laces, embroideries, buttons, etc.

Section 4.—Haberdashery for men and women, silk, straw and felt hats, boots and shoes, clothes, shoe brushes, etc.

Section 5.—Leather, India rubber, waterproofs, cork (raw and manufactured).

Section 6.—Lithography, typography, chromolithography, and inks.

Section 7.—Furniture, carriages, artistic and ordinary furniture, carved furniture, bed-room and parlor suits, rugs and carpets, clocks (set in marble, alabaster, bronze, wood, etc.).

Section 8.—Ceramics and glassware.

Section 9.—Paintings and sculptures, architecture, drawings, intaglio, engravings, photography, etc.

Section 10.—Gold and silver wares, jewelry, carved lava, coral, tortoise shell, filigree work, etc.

Section 11.—Music and musical instruments.

Section 12.—Education, books, pamphlets, monographs, manuscripts, text-books, maps, plans, models, drawings, etc.

Section 13.—Mechanics, electricity, etc., steam-engines and locomotives, pumps, gas and electric motors, agricultural implements, surgical instruments, iron safes, etc.

Section 14.—Scientific and optical instruments.

SIXTH DIVISION—SCIENCE OF NAVIGATION.

Section 1.—Ancient navigation, models and drawings of vessels before, at the time, and since the discovery of America, appliances, machines, etc., used in ancient and modern navigation.

Section 2.—Armament, victualing or ship stores, ship chandlery and furniture, life-saving apparatus, diving apparatus, maritime hygienics, nautical instruments, charts, maps, drawings and paintings, yachts and pleasure boats.

Section 3.—Models and plans of docks, anchors, lighthouses, buoys, dredging machines.

SEVENTH DIVISION—ARCHÆOLOGY.

Relics (American, Spanish, Genoese, Venetian) of the time of the discovery of America.

AGRICULTURE IN SAN PEDRO SULA, HONDURAS.

REPORT BY CONSUL PETERSON, OF TEGUCIGALPA.

THE CITY.

The city of San Pedro Sula, Honduras, is situated in the northwestern part of the Republic, 38 miles from the port of Puerto Cortez, and connected with the port by a narrow-gauge railroad, which is a part of the interoceanic system. In a direct line it is estimated that the city is about 15 miles inland from the arm of the Gulf of Honduras, upon which the port of Puerto Cortez is located.

The population of San Pedro Sula is estimated at 5,000, and is rapidly increasing.

THE DISTRICT.

The district of San Pedro Sula embraces an area of more than 100 square miles. Of this a very large area is valley land, 350 feet above sea level and surrounded by high lands that are especially adapted to the growing of coffee, an industry as yet in its infancy, but which has of late engaged the attention of Americans as well as of natives.

COFFEE INDUSTRY.

During the year 1888* 54,000 pounds of coffee were exported to the United States and 833 pounds to Belize from this district. During 1890 there were exported about 180,000 pounds, only a small portion of which went to the United States. It is estimated that double this quantity will be exported during this year.

The price of coffee during the past 4 years has increased from $18 to $45 per cargo, or from 7 cents to 16 cents per pound, United States currency.

*I have no statistics for 1889 and few for 1890, so I am compelled to use 1888 statistics.

An American firm has lately introduced machinery for drying, hulling, and separating the coffee bean into three grades. This is the first machinery of the kind or for this purpose introduced into Honduras, and is now used on a plantation a portion of which is 45 years old.

Coffee plantations will commence to give returns in 3 years, and after 5 years will pay very well to those who have the capital to invest in labor-saving machinery.

Although the valley lands yield nearly as much coffee per tree as do the higher lands, the former, as yet, are devoted almost exclusively to the production of bananas.

BANANA INDUSTRY.

About 2,000 acres of land in this district are at the present time under cultivation as banana plantations.

Owing to the uncertainty of transportation and the low prices, due to the fact that the transportation is in the hands of a monopoly, less than 100,000 bunches of bananas were exported during 1888. During 1890 over 400,000 bunches were exported.

From May 1 to September 1 the price paid is 18 cents per bunch, and during the remainder of the year 23 cents, United States currency.

The export duty on bananas of 1 cent per bunch has lately been removed.

Recently some Americans have sent samples of dried bananas to the United States, and, if they are successful in creating a demand for the dried fruit, they propose to introduce evaporators and engage in the business extensively.

On the expectation that the Honduras Interoceanic Railroad will be improved and extended many persons are locating land and planting bananas.

All bananas exported from this district go to the United States.

RUBBER INDUSTRY.

Rubber in this district bids fair to diminish in quantity of production very materially. The reckless manner of tapping the trees and the loss of trees in clearing the land will, in the near future, destroy the rubber production.

Growing rubber trees offers, without doubt, a paying investment. But, owing to the fact that it is as yet untried in this district, and therefore uncertain, and to the fact that it requires an investment of capital without returns for many years, the cultivation of the tree has not been tried, and the industry has given way to that of banana-planting, which yields quick returns.

The exports of rubber from this district during the year 1888 were 30,070 pounds to the United States and 833 pounds to Belize.

SARSAPARILLA INDUSTRY.

Honduranean sarsaparilla is a drug well known in the American market, where it ranks as first-class. It is exported to the United States in bales of about 200 pounds each. It seems to be the root of at least three different

species of smilax. Some of the roots exported are looked upon by the natives as entirely inert. The exporters of sarsaparilla take great pains in preparing it for market—cleaning it by scrubbing with a stiff brush until all dirt and small fibers are removed, packing it in small bundles in a compact form, and then putting it into bales with heavy pressure and covering the ends with raw hide.

In 1888 39,000 pounds were exported, and it is estimated that this is about the average annual production.

INDIGO AND CACAO.

Indigo seems to be of little importance. In 1888 there were exported 1,311 pounds, and since then it is estimated that the exports have been growing gradually less.

Cacao, or the chocolate bean, produces very well in this district, but the supply is not sufficient for the home demand. It sells readily in San Pedro Sula, for private consumption, at 37½ cents per pound (United States currency).

HIDES.

Hides are exported in small quantities; 61,388 pounds were shipped in 1888. Deer hides are sent to the United States principally. In 1888 25,814 pounds of deer hides were exported to the United States and 174 pounds to Belize. The annual export of deer hides is from 25,000 to 30,000 pounds.

LOCATION OR PURCHASE OF LANDS.

The municipality of San Pedro Sula owns a large tract of land, and any person may secure the right of possession to whatever boundary (not already taken) he may locate and cultivate. This right of possession is the property of the settler only for the time he cultivates the soil, although before he loses his right it must be proven that he has absolutely abandoned the land. The right of possession is transferable. Lands other than this municipal tract belong to individual holders or to the Government and can be obtained in fee simple at fair prices.

GENERAL REMARKS.

It is expected that bananas and coffee will be produced in much increased quantities in the future. New capital is coming in and inaugurating these industries. The future prospects of sarsaparilla and hides is not brilliant, as industry seems turned towards bananas and coffee as promising the surest, quickest, and best returns.

The rubber production will practically cease, at least until capital willing to wait for returns will seek this source of investment.

It is expected that the repair and extension of the Interoceanic Railway will instill increased activity into agricultural interests in this district, which offers unparalleled advantages as to climate, health, and productiveness of the soil.

The revival of the United States consular agency at San Pedro Sula by the Department and the appointment of Dr. J. M. Mitchell, jr., as consular agent will give to business men of the United States a better means of obtaining information concerning this district and will be a source of benefit to prospectors and capitalists seeking investment.

JAMES J. PETERSON,
Consul.

UNITED STATES CONSULATE,
Tegucigalpa, June 6, 1891.

THE GRAIN QUESTION IN GERMANY.

REPORT BY COMMERCIAL AGENT SMITH, OF MAYENCE.

A severe winter and a backward and rainy spring injuriously affected the grain crops of Europe, and the probability is that there will be a much less quantity of good wheat and rye harvested this year than is usually obtained. This prospect has given rise to a good deal of talk and speculation in Germany and led newspapers and politicians in opposition to the Government to magnify the evil as much as possible and seek to force from the Government a modification or temporary suspension of the grain duties until February of next year, when the new commercial treaty with Austria-Hungary, providing for a reduction of the duties on wheat and rye therefrom, will go into effect if ratified by the two countries, as it no doubt will be. But the Government appears to remain steadfast in its determination not to modify or suspend the duties at present, and maintains that the stock of wheat and rye on hand and the outlook for the year, although somewhat unfavorable, do not warrant the clamor that has been raised, and that the wants of the country will be supplied at reasonable prices without a resort being made to a suspension of duties to keep them in proper bounds; and, besides, such an act, it says, from its transitoriness, would probably very much unsettle the grain market and lead to mischievous consequences. France, however, in apprehension of a tight market, has determined to lower its duties on grain and flour to avert discontent among its working people.

Bread is 50 per cent. dearer in Germany than it was 5 years ago, and potatoes, another great article of consumption among the poor, are 80 per cent. higher than in 1890; and the Social Democrats are taking advantage of the high prices now prevailing for food to impress with additional emphasis upon the working people the wrongs they labor under and embitter them all the more against the governing classes. Ever anxious to incite the common toiler to discontent with the conditions existing about him, they eagerly avail themselves of every opportunity that presents itself to maintain and augment his dissatisfaction; and high bread and meat prices, brought about in part by duties which can be argued to have been levied to favor a small landed aristocracy at the expense of travailing millions, undoubtedly make an excellent weapon for this purpose.

Prince Bismarck is said to have cherished the belief, and to have made this belief a principle of policy and action while chancellor of the Empire, that Germany is essentially an agricultural State, and that its well-being is inseparably connected with that of its agricultural aristocracy, whose particular interests should consequently always be an object of solicitous concern to the State. He had an idea that the farmers of the Empire would be able, through protection, to supply the ever-increasing needs of the country in breadstuffs, and he obtained for them all the special legislation he well could. It was also his policy to shield German manufactures from foreign competition by protective duties, but manufactures are represented to have been, nevertheless, secondary in his eyes to agriculture. Thus he strove to preserve both agriculture and industry from foreign competition and to stimulate each, but he made many enemies thereby who soundly denounced his internal policy; and the latest protection to the farmers happening to be made at a time when meats and breadstuffs started on a rise, it has had the appearance to the laboring people of greatly enhancing the cost of living to them to put money into the pockets of a favored class.

"The foreign seller will pay the duties," argued Bismarck before the Reichstag in pleading for increased duties on grain, "and our farmers will get the protection they stand so much in need of." But the foreigner does not always pay the duties, as the result proves, and Bismarck, at the time he did it, was laughed at for making such a declaration. The price of the imported grain has recently been, as a general thing, the selling price of the native cereal plus the customs duty. General von Caprivi, the present chancellor of the Empire, said a few days ago in the Prussian Landtag, in commenting on the present grain situation in Germany, that for a number of weeks the price of grain in the Empire had been the world's price, that is, the London price plus the German duties, but that at the time he spoke it was varying, being sometimes above, sometimes below this; in general, however, the price in the world's market plus the German duties.

Careful students of the matter are of the opinion that the high duties, while influencing grain prices, have not all along raised them on the whole to the extent of the duty, but, nevertheless, materially enhanced them, and sufficiently so to have a marked influence upon the economical life of the people. Upon wheat the increased duty decidedly manifests itself, but upon rye less so, as Russia seems to take a part of it. Cheaper freights and better facilities for carriage and storage in Russia have contributed to cheapen rye.

At the time of the creation of the German Empire there were no customs duties levied on grain by the states composing the German Zollverein, or customs union, and there had been none since 1865, when slight duties then existing were abolished; and from 1871, when the Empire was established, to 1879 no duties on grain were exacted. In this year a duty of 23.8 cents per 100 kilogrammes (220 pounds) was laid upon wheat, rye, and legumes and of 11.9 cents upon barley, maize, and buckwheat. This was going beyond all precedent, I believe; but in 1885 the duty on wheat and rye was

trebled and made 71.4 cents per 100 kilogrammes, while being proportionally raised on buckwheat and barley. But still the German farmers were not satisfied and demanded more, and in 1887 they got the duty on wheat and rye increased to $1.19; on oats and malt, to 95 cents; on barley, to 53½ cents; and on buckwheat, legumes, and maize, to 47½ cents per 100 kilogrammes. They would have liked to have gone further, but a halt was cried here.

With the improvement after our civil war of the means of transportation and the cheapening of freights, it became possible for our people to compete keenly in the markets of Europe in wheat and pork with the products of the Old World and considerably lower their prices. The force of this competition the farmers of Germany were not long in experiencing, and it became manifest that the Government must afford them aid or general bankruptcy would ensue and break down a long-established gentry. Heavy importations from America, Russia, and India were keeping grain prices at so low a figure that there was little or no profit to the German farmer in their production, and he had to get protection or sell out. Germany does not raise wheat and rye enough to meet its own needs, and must look to foreign sources to supply the deficiency; but it can not afford to have what it does produce depreciated in value and rendered unprofitable by excessive importations. The men thus threatened were for the most part of noble lineage and pillars of the monarchy, with sons constituting the flower of the German army, and the State could not idly view their demoralization. It had to make an effort to shield them from acute foreign competition, especially when that competition threatened to destroy their standing as a class by driving them into bankruptcy and forcing the sale of their lands or reducing them to inferior ways of living that would ill comport with their standing. These men are cultivating their estates under hampering and dear conditions, are living expensively, and can not compete, without Government favor of some kind, with American products that come from large tracts of new and rich land, obtained cheaply and cultivated with highly efficient agricultural machinery that does away largely with manual labor and makes the cost of production light; and it is not only in grain that they are deeply interested, but in those other products of the farm that enter so largely into the daily use of men, such as pork and beef, brandy and sugar, for they are the great distillers and sugar-makers of the realm, I understand. It is only natural, therefore, in view of this relation, that the interests of these men should command a very respectful hearing in governing circles.

The increased duties did not lessen the amount of grain imported; on the contrary, there has been a greater importation of wheat than before. But they must have checked excessive importations, and thus have been advantageous to the farmers. No amount of reasonable protection can, it is said, stimulate the production of grain in Germany to the extent of materially augmenting the amount raised in the Empire and making it independent of the outside world in breadstuffs. Germany will always have to do considerable importing of the cereals.

But, whatever effect the imposition of the grain duties may have had upon the farmers or on the country at large, it was undoubtedly a lucky venture for the national treasury, as it received thereby in 1889 nearly $25,000,000, 27 per cent. of the entire customs duties collected being from grain. This was much more than anyone had any idea would be realized in any 1 year.

A Hungarian writer of note on political economy, von Matlekovitz, affirms that a revenue of about $20,000,000 derived by the German Government in 1889 from the duties on wheat and rye caused the German people an additional outlay of at least 275,000,000 marks ($65,000,000) by enhancing the price of wheat and rye.

Russia is the chief supplier of Germany with bread corns. In wheat 48.7 per cent. of the entire quantity imported from 1879 to 1890, exclusive of the exportation, came from Russia; in rye, 66 per cent. Austria-Hungary's participation was 23.6 per cent. in wheat and only 2.8 per cent. in rye. Last year (1890) the United States sent to Germany a little less than half as much wheat as Austria-Hungary and between one-seventh and one-eighth of the quantity that came from Russia. In rye Germany received more than twice as much from the United States as from Austria-Hungary, but the importation from the United States was only one thirty-third of what it was from Russia.

The following table will show Germany's imports and exports of wheat, rye, oats, barley, and flour since 1879:

IMPORTS.

Year.	Wheat.	Rye.	Barley.	Oats.	Flour.
	Tons.	*Tons.*	*Tons.*	*Tons.*	*Tons.*
1880	227,553	689,563	222,271	161,686	70,402
1881	361,949	575,454	247,828	262,590	80,570
1882	687,241	658,280	372,648	274,868	59,567
1883	641,910	777,046	321,507	260,076	67,086
1884	754,512	961,560	440,080	366,413	46,282
1885	572,423	769,701	438,036	218,083	27,677
1886	273,280	565,265	353,896	81,031	16,994
1887	547,255	638,544	511,526	167,577	24,465
1888	339,767	652,811	444,781	181,263	10,904
1889	516,887	1,059,731	651,422	258,004	13,922
1890	672,344	876,214	734,967	187,612	14,242

EXPORTS.

1880	178,170	26,587	154,409	43,564	144,607
1881	53,388	11,564	119,318	31,591	91,663
1882	62,502	15,755	79,743	25,779	138,974
1883	80,758	12,134	82,824	41,823	166,796
1884	36,193	6,286	37,265	18,527	131,431
1885	14,080	4,021	24,706	12,821	133,250
1886	8,294	3,198	58,080	16,493	138,466
1887	2,840	3,138	20,748	8,285	136,950
1888	1,116	2,262	23,245	1,815	151,128
1889	758	608	22,113	328	145,248
1890	206	119	6,425	461	116,191

NOTE.—These tons are of 2,200 pounds.

Notwithstanding the duties, the average price of wheat in old Prussia during the last 10 years was less than that for the period from 1850 to 1870, and considerably less than that from 1870 to 1880. In rye the average price was pretty much what it had been previously. How prices ran per ton of 2,200 pounds is shown by the following exhibit:

Period.	Price.				Relative rise or fall.			
	Wheat.	Rye.	Barley.	Oats.	Wheat.	Rye.	Barley.	Oats.
	Marks.	*Marks.*	*Marks.*	*Marks.*				
1851–'70	207.70	160.00	148.20	142.20	100	100	100	100
1871–'80	223.20	172.80	166.40	157.80	107.46	108	112.28	112.38
1881–'85	189.60	160.00	154.80	145.80	91.29	100	104.45	102.53
1886–'89	171.84	137.00	134.00	129.76	82.73	85.63	90.42	91.25
1890	192.00	169.40	167.16	164.20	92.44	105.88	112.8	115.47

According to these figures, the complaints of the opposition journals as to the tremendous enhancement of the price of grains through the customs duties are not well founded when the relation of prices of to-day in the Empire is compared with those of a long series of years; but when a look abroad is taken and a comparison of the ruling prices in Germany is made with those of countries free of duties, there is a justification for murmur. It is not a question of whether prices are higher or lower than they have been for years, but whether the Germans have to pay more for their bread in consequence of duties than other people do for theirs, and whether, through taxation, the workingman loses on one of the main necessaries of life an advantage he would otherwise enjoy. The fact is that the grain duties, it has been calculated, cause the workingman of family on small wages an expenditure of about $5 a year, which means a good deal where every penny counts.

The effect of the grain duties is very nicely exhibited by a comparison of the price of wheat in seaport places enjoying free entry with those paying duty. Dantzic, for instance, a free port, quotes wheat from 1879 to 1884, when the duty was only trifling, at the same figures as Königsberg and $1.42 per ton of 2,200 pounds lower than Stettin. From 1885 to 1887, when the duty was $7.10 per ton, Königsberg's quotation rises to $3.57 above Dantzic's and Stettin's to $4.52. In 1888–'89, when the duty was $11.90 per ton, the difference was $8.80 with respect to Königsberg and $10.71 in the case of Stettin. A similar picture is presented by a comparison of the price of rye at Bremen, a free port, with the prices, comprehending duty, ruling at Stettin and Berlin. From 1879 to 1884 the average price of rye at Bremen was 38 cents less than at Berlin and almost 59 cents less than at Stettin. From 1885 to 1887, under a duty of $11.90 per ton of 2,200 pounds, the price of rye at Bremen, where no duty had to be paid, was $6.18 less than at Berlin and $5.47 less than at Stettin. With the duty increased in 1887 still further to $11.90 per ton, the price at Berlin became $10.47 higher than at Bremen and at Stettin $10.

From 1851 to 1870 the ton of wheat cost in England, on the average, $10 more than in Prussia, it is said; from 1871 to 1880, only 71 cents more; from 1881 to 1885, about $2.14 less in England than in Prussia; from 1886 to 1889 it got to be $7.61 more in Prussia, and in 1890 $10.47 more. In southern Germany the difference was still greater in later years. In recent years rye has been $4.76 dearer in Prussia than wheat in England.

Rye is the grain mostly used in Germany for bread. The poor use but little wheat, and with the well-to-do even rye is often preferred to wheat bread. Rye is higher now than it has been for years, and, according to Mr. Richter, one of the leading politicians of the Empire, there have been during the century higher prices only in 1816–'17 and 1846–'47, which were famine years; in 1854–'55, during the Crimean war; in 1867–'68, which was a year of great scarcity; in 1873–'74, and in 1880–'81. In these years, apart from 1880–'81, there were either no duties existing or they were suspended.

Price quotations show that under the duties such places as Berlin, Halle, and Leipsic, in the northern part of the Empire, pay proportionately more for wheat and rye than places near or on the Rhine, as Frankfort and Cologne; and that places in southern Germany, as Lindau, Munich, and Stuttgart, pay more for wheat than northern ones, though not quite so much in the last 2 years for rye. This is rather an interesting fact, which is more clearly set forth in the following tables, where 100 is taken as the price from 1879 to 1884 and the relative price since put above or below 100, as it has happened to be:

Table showing the relative price of wheat in the German Empire from 1879 to 1890.

Markets.	1879–'84.	1885–'87.	1888.	1889.	1890.
Dantzic*	100	74.13	70.95	72.20	76.15
Königsberg and Posen	100	82.28	88.05	92.77	98.04
Stettin	100	81.26	90.14	93.31	97.41
Berlin, Halle-on-the-Saale, Leipsic, and Magdeburg	100	81.61	88.64	93.62	97.28
Cologne and Frankfort	100	80.16	84.79	90.25	95.36
Lindau, Munich, and Stuttgart	100	88.81	92.84	95.82	101.5

* A free port.

Table showing the relative price of rye in the German Empire from 1879 to 1890.

Markets.	1879–'84.	1885–'87.	1888.	1889.	1890.
Bremen*	100	66.8	62.92	67.48	76.45
Dantzic	100	79.18	80.54	98.86	105.36
Königsberg and Posen	100	79.53	79.32	96.11	104.29
Stettin	100	82.47	85.20	98.92	107.71
Berlin, Halle-on-the-Saale, Leipsic, and Magdeburg	100	80.55	81.98	96.46	104.81
Cologne and Frankfort	100	81.57	80.5	90.95	98.71
Lindau, Munich, and Stuttgart	100	87.41	86.63	92.56	103.25

* Without duty.

In recent years it has become more difficult for the German farmer to dispose of his products than formerly. This is largely because of a general complaint that the grain of northern and central Germany is poor in gluten,

and foreign grain, in consequence, commands a better price in the German market than the native does. The German peasant is also charged with not planting his grain sufficiently clean and with careless cleaning and separating of it after harvest. His grain lacks the uniformity the foreign article generally bears. The result is that large dealers and millers buy foreign rather than native grain, and leave the peasant to sell his small crops at disadvantageous prices to small buyers. For such agriculture to be defended by Government protection is to my mind a very unmerited fostering.

What influence the high grain duties exert upon farmers does not clearly appear. The position of the small farmers would enable them to adapt themselves to new conditions much more easily than the large ones could; but, says Professor Conrad, of Halle, in an article in the Jahrbücher für Nationalökonomie und Statistik:

> All reports agree that nowhere has any decided improvement in the methods of agriculture taken place, but rather a greater attention been given to cattle-raising as an offset for low grain prices.

There has been, however, no diminution of the land under grain cultivation, but rather a slight increase of it, as will appear when it is stated that to the four leading grains were devoted: In 1878, 13,508,036 hectares (about 33,770,090 acres); in 1883, 13,621,090 hectares (about 34,052,725 acres); in 1888, 13,668,699 hectares (about 34,171,747 acres). The amount of land given over to rye declined from 5,927,000 hectares to 5,814,000 hectares (about 282,000 acres less), while the area under wheat cultivation rose from 2,204,000 hectares to 2,899,000 hectares, a gain of about 1,737,000 acres.

The great trouble in Germany is that farm land is held too high. In the last 100 years, especially between 1840 and 1875, it has steadily risen in value. Any favor received from the Government which eases the position of the farmer makes his land more valuable to him, so that old conditions soon become reached again, and all protection gives him artificial prices to depend upon, which, if ever removed suddenly, would let him down with a bump, to his great disaster. He has got to conform to the new conditions which have arisen by holding his land cheaper and working it more rationally, and it is simply a question of time when the final reckoning comes. His judgment may be deferred, but it can hardly be prevented. He is not like a manufacturer, who by protection can build up a new industry. Farming is an old pursuit which in these days must be followed on new lines. The price of land should reach a basis where the land can be profitably worked.

In old Prussia, that is, Prussia as it was prior to 1866, when new territory was acquired, there are 289,444 hectares (about 723,610 acres) of arable demesne land rented out. Taking 100 as the rent paid in 1849 per hectare (2½ acres) for such land, the statistics of the monarchy show that the same land brought in 1869, 20 years later, 187.84 per hectare; in 1879, 256.33; and in 1890–'91, 280.22. This is a decided rise. The price paid per hec-

tare was $3.30 in 1849, $6.21 in 1869, $8.47 in 1879, and $9.27 in 1890–'91. The land is taken for 18 years always. In the case of new leases a decided drop has taken place in the last 4 or 5 years in the amount of rent stipulated for. The old tenants are paying high rents, but an exhibit of the new leases made since 1876 shows that, while the rent agreed upon in 1877, compared to 1870, was as 159.3 to 100, in 1889, compared with 1877, it was but as 78.9 to 100. How the rent has fluctuated from year to year from 1877 to 1889 in the case of new holdings will be seen from the following table:

Table showing the number of new leases made and the relative prices per hectare above or below the old leases, taking 100 as the old price, from 1877 to 1889.

Year.	Number of leases.	Relative prices.
1877	26	159.9
1878	35	138
1879	14	155.5
1880	31	108.6
1881	29	109.5
1882	30	105.9
1883	45	154.5
1884	23	135.2
1885	32	122.9
1886	26	107.8
1887	45	89.6
1888	40	82
1889	9	78.9

In Baden the average rent paid for agricultural land has sunk from $22.84 per hectare in 1878 to $20.23 in 1888, while meadow land has gone from $2.83 to $2.53. Only those estates, it is said, which are bound up in entail or have only one heir will draw permanent advantage from the legislation of the past few years in favor of the farmers, such as the increased duties on corn, wood, and meat and export drawbacks on sugar and brandy. All others will experience in the end damage, because of the custom so general among the German gentry of one heir taking the land bound by obligations to the rest of his family, whose interests become mortgages equivalent to their share in the inheritance at good rates of interest, whereby the estate becomes at times heavily fettered to the great detriment of the possessor. Should a drop in the protective customs duties or a heavy and lasting general fall through any means in the price of farm products come, there would doubtless be a great shrinkage in the value of farm land, which would fall solely upon the party in possession, encumbered by family or other obligations founded on a high valuation; and, should the duties on farm products continue 10 or 12 years longer, it is apprehended by some that they could not be removed without bringing about ruin to at least one-half of all the large farmers. They are working along with a deficit every year which will in time eat up their capital.

"During the last 3 years," said Count Kanitz, one of the farmer party, in the Prussian Landtag on June 12, "273,000 hectares (682,000 acres) of

farm land have been sold in Prussia at forced sales, 82 per cent. thereof in the eastern provinces, where farming is the chief occupation of the people. While the farmers have been declining, the wealth of the country at large in the last few years has increased $81,396,000, and the average weekly wages of the workingman have in the last 10 years risen from $4.52 and $4.76 to $7.85 and $8.50 a week; and in Berlin one sees large stone houses torn down for grander ones to be erected in their stead, but no such evidence of prosperity is witnessed in the country. We people in the country have to keep on patching our miserable thatched roofs. The high prices ruling for bread are due largely to the big profits made by the bakers." "Well, then," said a voice, "why don't you give up farming and go to baking?"

While the Government is indisposed to have the grain duties lowered by legislation, and does not consider a reduction of them an economical necessity, it perceives that they can be very advantageously used to conclude treaties of reciprocity with neighboring states and is now employing them to this end. It will look out for the farmers, but manufactures and commerce will probably be of more concern to it.

Germany ceased long since to be an agricultural State, although its agriculture is still of marked importance. It has become one of the great manufacturing and commercial states of Europe, sending abroad its ships to all quarters of the globe, and in commerce is surpassed now only by England. Of the exports of Germany 72.4 per cent. are articles of manufacture, while of its imports only 15.9 per cent. figure as manufactured goods. It thus largely supplies itself with its own manufactures and looks abroad for breadstuffs and raw materials. Of Great Britain's exports 91.9 per cent. are manufactured goods, and of its imports only 12½ per cent. Therefore, argue many in the Empire, Germany's nearest interests lie in manufactures, and its economical policy should be to foster these, which can best be done by imitating the example of England and allowing free access to breadstuffs and the raw materials which enter into manufactures. Up to 1879 it was Germany's disposition to have a moderate tariff, and the present Government, it is said, is disposed to return to the old traditions departed from by Bismarck; but of such a disposition I see so far no manifest evidence. The Empire, it is true, is just engaged in negotiating a series of commercial treaties with neighboring states, but just what it proposes to grant and obtain by such compacts the uninitiated can not undertake with accuracy to say. What it is striving to effect has somewhat the appearance of a commercial coalition against France and of a commercial confederacy of the states of Europe offering a solid front to the United States of America. Either may be the object had in view, and neither may, in fact, be intended. It is possible that it has been determined to depart from the high duties of the past, but, instead of lowering them by legislation, to use them to secure advantages from other powers through treaties with reciprocal benefits. A treaty of reciprocity with Austria-Hungary has just been concluded, and this treaty is to be followed, it is said, by a number of others with Switzer-

land, Servia, Italy, Roumania, Belgium, Holland, Spain, and Portugal, and it is even possible that in the end Russia and France will be added to them. With England a commercial treaty is not a necessity, as her ports are always open.

Should the Empire be fortunate enough to conclude favorable commercial treaties with the aforementioned eight states, a territory, including its own area, of 2,343,000 square kilometres, with 159,000,000 inhabitants, and an import and export trade amounting to $5,049,884,000 would be brought into commercial union. Opposed to this would be France with its 38,000,000 inhabitants and extensive trade and Russia with 95,000,000 inhabitants and a vast territory, but of secondary consequence in commercial and industrial respects. Such a prospect, it can well be imagined, is very unpleasant to France, who sees herself threatened with a sort of commercial isolation if she persists in her present policy of high duties and unfriendliness to reciprocity.

The treaty with Austria-Hungary is a natural outcome of the intimate political relations subsisting between the two countries and an extension and solidification thereof. Germany lowers its duty on wheat and rye from $1.19 to 83 cents per 100 kilogrammes, and Austria, in return therefor, modifies certain of its duties on industrial articles in which Germany is greatly interested. The treaty is a departure from Prince Bismarck's policy, and were he still at the head of affairs it would never been concluded.

Germany does not produce any one of the cereals in sufficient abundance to supply its own needs, and the statistics of its foreign trade show a much larger importation of wheat, rye, barley, corn, and oats than exportation. The average annual importation and exportation of each of these grains, as well as of flour and malt, during the 10 years 1880–'89 was, in round numbers, about as follows:

Articles.	Imports.	Exports.	Difference.
	Tons.	*Tons.*	*Tons.*
Wheat	492,300	43,800	448,500
Rye	734,800	8,600	726,200
Barley	400,399	62,200	338,200
Malt	60,600	6,300	54,500
Oats	223,200	20,100	203,100
Maize	217,100	.....	217,100
Flour	41,800	137,800	96,000

So in flour only was there a greater exportation than importation.

Now, it would naturally be to the interest of Germany to draw what it lacks from those geographical neighbors which are its political allies rather than from the remote United States, and to stimulate its manufactures by furnishing its neighbors with manufactured goods in return for their grain. Russia and Germany are no longer on excellent terms, and they would hardly just now be inclined to establish intimate trade relations with each other. Besides, the policy of Russia is one of high protection. Russia has an abundance of grain, but Germany would not be expected to go to Russia

first of all to get its breadstuffs. It would naturally first look to Austria-Hungary, its near friend and ally. Hence, in its new policy, it begins with this monarchy. Austria-Hungary shows an ability to export, but its capacity to do so is not equal to Germany's demands, and Germany must look still further for the balance.

Tables for the years 1880–'89 show that Austria-Hungary's average annual export was greater only in wheat, barley, malt, oats, and flour than its import, and that of rye and maize it was obliged to import a greater quantity than it exported, as follows:

Articles.	Excess of exports.	Excess of imports.
	Tons.	*Tons.*
Wheat	122,200	.....
Barley	269,500	.....
Malt	95,900	.....
Oats	36,300	.....
Flour	141,900	.....
Rye	.....	40,700
Maize	.....	136,300

Austria-Hungary can not, therefore, according to these figures, make up Germany's deficiency in any one of the items in which it is lacking except malt; and, considering the flour and malt by the quantity of wheat and barley respectively that enter into them, Germany and Austria-Hungary combined do not raise in wheat, rye, maize, and oats all that they require of these articles, and Germany, if desirous to confine its trade in them to European countries, would have to go beyond Austria-Hungary. Next to Austria-Hungary it would want to turn to Italy, its other ally in the so-called triple alliance; but Italy, too, is compelled to look abroad for the satisfaction of her needs. She is far from producing wheat enough for herself, and imports about 528,000 tons a year, reckoning the flour imported as grain at 100 pounds of grain to 82 pounds of flour. In the matter of rye Italy is not to be considered, either in export or import respects. In maize she lacks about 2,900 tons annually; in oats, about 1,900 tons; and in barley, about 600 tons. These friends and allies—Italy, Germany, and Austria-Hungary—are therefore clearly not able, without outside help, to keep themselves in the grains and bread of life. Perhaps they would like to form a kind of close corporation to do so, but the ability to produce does not at present appear to exist. Russia is a great granary, but relations with Russia are a little strained on the part of them all, and in the forming of treaty compacts providing for reciprocal advantages they would prefer to look toward the Balkan states. Switzerland does not count for anything in the production of grain, and Greece is a grain-importing State, while Turkey, on account of the peculiarity of its situation and interests, and Servia, because of its slight exporting capacity, can not be calculated upon. Bulgaria and Roumania, therefore, as grain-growing territories, are the only remaining states to which Germany can direct its attention. They are both good producers of the various grains

and export them to a considerable extent, but they could only make up the deficiency of Germany, Italy, and Austria-Hungary in barley, wheat, and maize; for the aggregate average annual showing of the five countries (Germany, Austria-Hungary, Italy, Bulgaria, and Roumania) in respect to their combined needs is as follows:

Grains.	Available for export.	Necessary to import.
	Tons.	*Tons.*
Barley	337,000	.....
Maize	332,000	.....
Wheat	122,000	.....
Rye	.....	638,000
Oats	.....	125,000

There thus appears to be an inability on the part of the five states in question to fully supply one another with all the grains had they the desire to do so. In barley, maize, and wheat they might be able to do it if they confined their trade in these articles strictly to one another, for their combined production of these three cereals shows an excess over their requirements of 337,000 tons in the case of barley, 332,000 tons in the case of maize, and 122,000 tons in that of wheat; but there is the large lack of 638,000 tons of rye and 125,000 tons of oats, which would have to be procured outside of the alliance. But the important factor of reciprocity in any such commercial union and the probability of states not parties to the compact resenting the exclusive policy of those committed to it by inimical discriminations against them will probably prevent any such league from becoming an enduring reality should one such ever be formed. Too diverse interests are at stake. Discrimination in grain on the part of one in favor of another calls for a reciprocal concession from the other, which might lead to various kinds of commercial or industrial disturbances. A permanent compact which shall bind them to one another in trade and industry seems to me hardly possible, and I doubt if an actual commercial confederation is contemplated. Such a thing between a couple of states might be brought about, but scarcely for all Europe.

JAMES H. SMITH,
Commercial Agent.

UNITED STATES COMMERCIAL AGENCY,
Mayence, June 23, 1891.

Trieste no longer a free port.—The port of Trieste, which became a part of the Austrian dominions in 1332, was declared a free port by the Emperor Karl VI, father of Maria Theresa, in 1719, and goods arriving at said port have been entered without payment of customs duties from that date up to the 1st of July, 1891, on which date it was placed on the same footing, in regard to customs duties, as other cities of the Empire.—F. D. GRANT, *Minister, Trieste, August 1, 1891.*

THE PETROLEUM MONOPOLY IN EUROPE.

REPORT BY CONSUL-GENERAL EDWARDS, OF BERLIN.

I have the honor to transmit herewith articles from leading German newspapers, together with translations of the same, concerning the petroleum trade and the much-talked-of monopoly therein.

W. H. EDWARDS,
Consul-General.

UNITED STATES CONSULATE-GENERAL,
Berlin, June 25, 1891.

THE PETROLEUM MONOPOLY.

[Inclosure 1 in Consul-General Edwards's report.—Translation from the Hanover Courier of June 24, 1891, morning edition.]

The petroleum monopoly with which the Standard Oil Company, in New York, in connection wlth the Paris Rothschilds, who control the Russian petroleum industry, proposes to afflict the world, is justly arousing attention in extensive circles. The might here united in the hands of the few for the fleecing of everyone in a certain way is the consummation of that economic form, which, under the names "combinations," "syndicates," "rings," or "trusts," in manifold gradations, has constantly grown in importance. Against these, from the beginning, we have taken a stand. Although in individual cases they may have a certain justification, in general they are economically and socio-politically dangerous, as their object or their effect is, if they meet with success, to place at the mercy of a narrow circle of interested parties the entire control of certain articles which the general public regards as necessaries. The national cartellists can, indeed, point to many instances which have our sympathy; but when, from their development, outweighing advantages arise for foreign consumers and corresponding injuries for domestic, this sympathy rightly disappears, and the domestic consumer, in his own interest, must seek ways and means to supply himself more cheaply in a foreign market. As has already often happened, and is constantly happening with us, the more the combination assumes an international character so much the more effectually is this means of escape cut off, for the sources of supply which have heretofore resisted absorption must sooner or later give up the struggle. It is unnecessary to paint more clearly in what economic dependence, when the ring is complete, the public stands to the will of the few; still less can one doubt how such economic montrosities must exercise disturbing influences in a socio-political way or how they will be used by the enemies of our economic order against the latter.

The Government, as well as society, is bound, especially against this attempt of the Standard Oil Company, to leave no means untried, however adventurous it may at the time appear, to escape this economic yoke. It would be fatal if Europe, without an attempt at serious defense in this struggle, would lay down, must lay down, her arms. Small means, such as the abolishment of the duty on petroleum barrels, would help very little and only temporarily. They would, however, be of value as a distinct sign of the desire to defend.

The peculiarity and danger of the petroleum ring lies in this, that it seeks to seize the entire petroleum business from original production to direct sale to individual consumers. That to the consumers the might of the petroleum ring has not yet shown itself in high prices is due to the fact that the ring is not yet complete; that the incorporation of the petroleum industry of Bakoo in the plan has not yet been secured. Here is, perhaps, the point at which successful effort may be made to avoid a serious economic calamity.

A "liberal" (Freisinnig) journal recalls, in this connection, the agitation which arose in Germany when it was proposed by the Imperial Government to introduce a tobacco monopoly. That of this agitation hardly any trace is now to be seen is due to this, that a government monopoly offers for the exercise of the activity of political parties entirely different opportunities of control and attack than does the monopoly of a private company. But we have confidence in our political parties that they will unanimously support all measures which will be undertaken by the Government against fleecing by private monopolies; and we think that such steps must be taken, for all the good points of a state monopoly—that the gains of the same are for the common good, and that those thereby injured can, in one way or another, be at least partially compensated, as, *e. g.*, was provided for in the tobacco monopoly—are wanting in a private monopoly, especially when the control is in the hands of foreigners. Such a monopoly is in every way unprofitable and dangerous to the public.

INTERNATIONAL PETROLEUM RING.

[Inclosure 2 in Consul-General Edwards's report.—Translation from the Berlin Vossische Zeitung of June 18, 1891.]

Recently, prompted by the communication of the minister of commerce to the Berlin Board of Trade, we thoroughly explained the circumstances under which, for a long time, attempts have been made by two powerful speculators in this article to create an international petroleum ring. Therein was shown the complete control which the American Standard Oil Company has known how to obtain for itself in the German petroleum market, and which has found expression in the German-American Petroleum Company, in Bremen, a company completely subservient to the American company. As is known, Bremen is one of the largest petroleum import markets in the world. It is therefore a striking fact that the Americans have compelled the great petroleum firms there to give up their independence and bow under their yoke. As a matter of fact, the business of the Standard Oil Company for a large district is now in the hands of a great Bremen firm, whose zealous activity in the common interest was formerly recognized in and outside of Bremen. The Weser Zeitung, which takes occasion, from the growing excitement in Germany in regard to the threatened petroleum monopoly, to interest itself at the same time in matters critical for Bremen's position, is of the opinion that the firm alluded to—Alb. Nic. Schütte & Son—was compelled to choose between accepting the new conditions or being crushed and incurring the danger of Bremen losing the entire petroleum trade without affairs being improved by a hair's breadth in the public interest; for no one doubts that the Standard Oil Company would not have gone a step out of its way if it had found no one in Bremen to enter into the demanded relations with it. As in Bremen, so also in Hamburg, the American speculators sought connections with the great petroleum houses, and, among others, forced the firms of August Sanders & Co. and G. I. H. Siemers & Co. to join them. The business control for the German ports lies, however, in the hands of the German-American Petroleum Company, in Bremen. Against the powerful Standard Oil Company, according to the Bremen newspaper, no other house could continue to compete, for there are only a few American enterprises remaining which continue the fight against the Standard Oil Company. Moreover, there was still another circumstance which favored the world monopoly of the Standard Oil Company and hastened the overthrow of the small petroleum trade. The German duty on petroleum barrels, which was intended to protect domestic coopers, naturally increased the expenses of firms which imported petroleum in barrels, while it favored the enterprise which imported the petroleum, not in barrels, but in ships' holds, and then, in the German ports, transferred it to barrels or cistern cars. Such ships, called tank ships, the Standard Oil Company has built in large numbers in order to make transportation cheaper. By this means, also, pressure was brought upon the great Bremen houses to compel them to enter into the plans of the Americans. In order to avoid the German duty on barrels, the Standard Oil Company erected at Geestemunde a barrel factory for American account. In

other words, it erected its own cooper shop in Germany. The German firms which have merged their identity in that of this company attend only to the business of forwarding to the interior. They sell everywhere to inland wholesale dealers and the larger retail dealers in the required quantities. For this purpose the entire country is divided among the companies into fixed districts, so that for other merchants hardly standing room is left. Petroleum tanks have even been erected at various places in the interior, *e. g.*, at Riesa, Duisburg, Mannheim, and it is feared that next the retail dealer will be found superfluous if the company gives the small trade as a local monopoly to a branch magazine. One group of business men after another is thus made superfluous and pushed aside. First, the wells, pumps, and refineries in America, then the American export trade, then the private freight vessels (so far as they were adapted for transportation of petroleum), then the European import trade, then the export trade from European ports, and, finally, this overpowerful company threatens to seize the entire retail trade in petroleum. It is a world monopoly—and at that a private world monopoly—such as, according to the Weser Zeitung, in like extension and ramification has never before existed. And the seat of this monopoly is America. Its supporters are a number of private persons. If the attempt be successful to bring under the same hat the Russian petroleum industry, whose reins are in the hands of the Paris Rothschilds, then the use of petroleum throughout the whole world will be dependent upon a few New York gentlemen. How it will then be with the present comparatively low prices of petroleum it is now futile to discuss.

PETROLEUM COMBINATION.

[Inclosure 3 in Consul-General Edwards's report.—Translation from the Berlin Vossische Zeitung of June 12, 1891.]

The new Prussian minister of commerce keeps a sharp eye on the movements in the modern system of combinations by which the masses of the population are made tributary to great individual interests.

It is true that his power in such cases does not always reach so far as in the case of the attempt of the Rhenish-Westphalian iron capitalists to form a monopoly; but, where this is not the case, he shows his interest in the welfare of the suffering classes by his efforts to secure a timely disclosure of such efforts to increase prices.

Thus the minister of commerce has called the attention of the Berlin Chamber of Commerce, as was made known at the last session of that body, to the establishment of a new ring, which fact had before been brought to the attention of the public only in authenticated newspaper reports and had been received with doubt. The case in point was the formation of a ring by the two great controllers of the international petroleum business (the Standard Oil Company, of New York, and the Paris Rothschild house) for a division of the markets of the world and the fixing of a selling price for this article, so necessary for the use of the masses. For many years negotiations in this direction have been pending between both private monopolists. It was difficult to come to an agreement concerning market frontiers and the character of products, yet these difficulties seem to have now been surmounted. The Standard Oil Company has in its hands the North American petroleum business, while the Rothschild house in Paris has almost exclusive control of the petroleum export trade from Bakoo. Until the Transcaspian Railway was opened from Bakoo to Batoum, the European market was supplied exclusively with American petroleum. Only since then has the Russian product been able to compete with the American successfully in the world's trade. Consequently, American petroleum has been frequently supplanted by the Russian, especially in Russia itself. In South Germany, Austria, Italy, England, Belgium, Holland, and Sweden the Russian finds rich markets side by side with the American. The business fight between the two private monopolists was, indeed, vigorous, but did not result in such reductions of price as have been observed in other similar struggles. It appeared as though there were already secret agreements between the

two which gave to the struggle its limits. At any rate, it was to be expected that two great capitalists would not continue such a war permanently, but would, sooner or later, agree to a common gain from the market.

It is so everywhere in commercial life. When the small must bring their produce to market, the great make peace together and combine for the common gain attainable from their position of mastery. Heretofore the two petroleum speculators have marched apart in order to get into their hands the two largest petroleum districts of the world. After this has been accomplished they unite to fight in unison and to fix as they please the selling price for the whole world, which they divide between themselves.

So an international speculating ring stands before the door such as in like might and capital power has never before existed, and everywhere the intelligible fear prevails that within a short time the price of an article of use indispensable to all classes of people will rise with a bound, without it being possible for national legislation or control to raise any obstacles.

To what degree the German public would suffer from the ring is shown by the previous action of the Standard Oil Company in Germany. It has purchased almost all the petroleum steamers running between Europe and America and compelled the largest German and Dutch petroleum houses to become stock companies, and thus to fall under the control of the Standard Oil Company. Only at the beginning of last year were the largest petroleum-importing houses in Bremen, Hamburg, and Stettin united by the Standard Oil Company into a German-American Petroleum Company, with its seat in Bremen, while the same fate overtook the Dutch importing firms near the end of the year. Thereby the unloading appliances of those houses, together with their customers, were transferred to the Standard Oil Company, which was now in position to easily push aside any remaining competition. The German petroleum business has since then been controlled by the Standard Oil Company, which has also fixed the selling price of this indispensable article. From this the almost invincible position of the American company in Germany can be seen. But this is shown still more plainly by the threat of the German-American Petroleum Company to erect petroleum tanks in all the larger German cities and to supply the retail dealers, and, perhaps, also the larger consumers, directly with petroleum, thus destroying the business of middlemen, in case the duty on petroleum barrels be removed in favor of small dealers.

The hope that Russian petroleum can perhaps be a substitute to break the overwhelming might of the Americans in the German market is idle if the combination is really effected between the Standard Oil Company and the Paris Rothschilds. No turn of affairs can be counted on. Already too long have the efforts to form such an international petroleum ring been unopposed. Now the danger is recognized, and it appears that steps are being considered with which to meet it. The communication of the Prussian minister of commerce shows this, but if it will lead to practical results is, indeed, another question.

THE PETROLEUM MONOPOLY.

[Inclosure 4 in Consul-General Edwards's report.—Translation from the Hanover Courier of July 13, evening edition.]

On this subject, the journal Industry contains a long article, which begins with the sentence, "There is no room for doubting that very soon we will have an international petroleum monopoly." The agreement between Rothschild and Rockefeller seems to this journal to be beyond doubt, because it is in the interest of these two masters of the most important petroleum wells in the world. It appears that Rothschild and Rockefeller have already agreed concerning qualities and prices, while the division of the world's markets is still under negotiation. The article then goes into the organization of the monopoly, a matter which we have already several times discussed. While in North Germany American petroleum has an exclusive monopoly, in South Germany it encounters competition with Russian petroleum, and a careful observance of the South German market will therefore very soon throw light on the

agreement between the two monopolists. Beyond question, America supplies by far the greater part of the petroleum which is used in Germany.

According to imperial statistics, the importation of petroleum into Germany was as follows:

Year.	Quantity.	Year.	Quantity.
	Tons.		*Tons.*
1880	266,587	1886	438,395
1881	364,879	1887	509,399
1882	342,510	1888	564,172
1883	370,305	1889	625,668
1884	462,545	1890	646,803
1885	482,189		

Of the amount imported in 1890 the United States supplied 549,772 tons; Holland, 15,325 tons; Belgium, 30,917 tons; Russia, 43,520 tons; and Austria, 5,372 tons.

The petroleum imported from Holland and Belgium was undoubtedly of American origin, while that imported from Austria was probably Russian.

What influence the monopoly will have on prices is, according to the Industry, doubtful. The consolidation of the petroleum industry of the United States into one hand has rendered possible a considerable reduction of price; ever since the establishment of the Standard Oil Trust the price has fallen.

That the completion of Russian petroleum has had any perceivable influence in reducing the price of the American article can not, according to the Industry, be positively asserted. Nevertheless, it is possible that Russian competition has had a temporary influence in this direction and that in the future the importance of its influence will be increased. It is, moreover, certain that the removal of this competition and the consolidation of the management of the two chief petroleum districts is disadvantageous to us. The matter has a still worse appearance when viewed from the standpoint of the former German petroleum trade. By the monopoly this trade is rendered impossible; it is ruined.

So far we can agree with the spirit of the article referred to, but not when it continues: "But it is another question if the wholesale petroleum dealers are ruined. Trade is so mobile that even here it may be possible to escape from the difficulty. In order to be able to ask support from any quarter, this trade must prove that it is in better position to effect the sale of petroleum in Germany than is the Standard Oil Trust. We doubt if, through its former actions, it is in a position to supply this proof. It is possible that the control of this business by a single party may result in further reductions of price. Concerning this, as well as concerning the future influence of the monopoly and the agreement between Rothschild and the Standard Oil Trust, only the future can decide. As far as the trade is concerned, it must become resigned to seeing itself supplanted by these speculators. This has already happened frequently in other fields of enterprise. Every combination makes a part of trade superfluous; therefore, before measures are adopted against the petroleum monopoly, it must first be shown that in its operation it is injurious. If this proof can be supplied, it must still be considered if we possess means to take a stand against an international monopoly and what these means are."

These last expressions we must very energetically oppose, not only in the interest of the German petroleum trade, but especially in the interest of German consumers. Whoever has not adopted as his specialty an enthusiasm for everything called combination or trust will not understand why we should surrender ourselves to the tender mercies of Russian-American monopolists. If anything can be done, then we must not wait to learn from the future, *i. e.* until it is too late.

We rejoice to see that the Government appears not to be waiting with its hands in its lap. At least the Königsberg Gazette reports that, among others, Privy Counsellor von der Leyen

has been directed by the minister of trade to investigate how the threatened union between the Standard Oil Company and Rothschild can be prevented.

Herr von der Leyen has lived many years in America and thoroughly understands trade conditions there. Especially concerning the plans of the Standard Oil Company had von der Leyen made careful study before the latest attempts to extend its enterprise began.

[Translation from Hanover Courier of July 17, morning edition.]

In an article concerning the petroleum monopoly the Hamburg Börsenhalle says that the struggle is not merely against the Standard Oil Company, "but against the attempts of this company and its European representative to obtain sole possession, or possession of any sort, of the storing places on this side of the ocean—this is undoubtedly the goal which every effort is being made to reach—for if the monopoly wins the game the fate of the free trade in petroleum and of the consumers is sealed. For this reason we dare not allow the monopoly to carry its point, and this is why it is so exceedingly necessary that in all German ports the harbor and trade officials shall not renounce their sovereignty over wharves and storing places, either in favor of the Standard or of any other company."

These remarks are worthy of very careful consideration, and we think it self-evident that neither Hamburg nor any other German officials will give way to the monopoly in the manner mentioned.

At any rate, this article presents another and very important side of the struggle against the dangerous monopoly.

MINERAL RESOURCES OF COAHUILA.

REPORT BY CONSUL FECHET, OF PIEDRAS NEGRAS.

The laws regulating the acquisition, holding, and working of mines and mineral lands are uniform throughout the Republic of Mexico. These laws are known as the federal mining code (law of December 15, 1883).

MINING CODE.

There is a distinction made between precious and noble metals. Mines, mineral deposits, etc., are acquired and held by denouncement under provisions of the federal code. The following metals and minerals are subject to acquisition by formal denouncement, viz: Gold, silver, lead, copper, iron, manganese, mercury, tin, antimony, zinc, rock salt, sulphur, placers of gold and platinum, and precious stones used in jewelry. Deposits of borax, soda, and alum, while not specially named, are undoubtedly included. Metallurgical and smelting sites for the treatment of ores and water for motive power and for needs of workmen and animals may be acquired by denouncement.

The following minerals, rocks, and earths are not denounceable, but pertain to the holder of the fee-simple to the soil: Mineral coal, limestone, slate, porphyry, basalt, and building stone generally, clays, sands, etc., placers of iron and tin, salt existing as an efflorescence on the surface, petroleum and outlets of gas, thermal or medicinal waters. Mining claims (*pertenencias*) are 200 metres in length by 100 to 300 metres in width, according

to dip or underlay of vein. Private individuals are entitled to three *pertenencias* and incorporated companies to four.

The federal code only permits a maximum tax of 2 per cent. on the gross value of the ores extracted, estimated at the mouth of the mine, and a tax (maximum) of $6 on every $1,000 value of metallurgical work with machinery, etc.

MINERAL RESOURCES OF COAHUILA, SANTA ROSA MOUNTAINS.

Villa de Musguiz district.—This district yields silver-lead ores. The output has been small, but is now increasing and will probably be considerable. The principal mines are the Cedral, Parellon, La Luz, San Juan (all in operation), and San Miguel (not now worked).

The San Juan is the oldest mine in this district, having been originally worked under Spanish rule in Mexico. Years ago work was suspended on account of water. The company now owning (Americans) is pushing a tunnel to completion, commenced by the Spaniards, to drain the mine.

The Sierra del Carmen district.—This district contains milling ores. The principal mines are the Fronteriza and Quartzo Grande.

The Fronteriza is owned by citizens of the United States, with office of company at San Antonio, Tex. This company has a fully equipped mill and is producing silver bullion. The Gloria, Mercado, and Real Viejo ranges have a small product.

Monclova district.—Some silver-lead ores occur in the mountains around Monclova, and very large bodies of iron ore (hematite) are also found. But little work has been done, although the iron is said to be of good quality.

Cuatro Cienegas district.—This district embraces the Purissima and San Marcos ranges. The ores are silver-lead carbonates. In these ranges only two mines of any value are now being worked, viz, La Reforma and San Marcos. The ores from this district were formerly shipped to the United States to be smelted, but now are smelted at Monterey, where a large smelting plant has just been completed.

In the Cotrero de la Mula some thirty mines have been denounced, but so far only one is giving good results (siver-lead carbonates).

At Condela are ores of copper carrying silver and traces of gold, none being worked at present.

Viesca district.—No mines are now worked, but coal, copper, and asbestos are found. The asbestos fiber is said to be very perfect and long, and the surface indications are promising of value.

Sierra Mojada district.—This is the principal mining district of Coahuila and the largest district in the Republic for lead ores, and it has been well compared to Leadville, Colo. Enormous bodies of silver-lead carbonates have been opened up, and the output from this apparently limitless supply is only limited by freighting possibilities in the way of ore wagons to haul the ore to Escalon station, on the Mexican Central Railway, 90 miles from the mines. These mines were only discovered in 1879, and have been

very successfully worked up to this time. The scarcity of water was the greatest drawback, but this has now been overcome by sinking wells.

American capital is very largely invested in the mines of the Sierra Mojada district. A railroad is now about completed to this famous district, and the output will now, of course, be largely increased. Mining has been greatly stimulated in Coahuila by the erection of large smelters at Monterey.

With the imposition of restriction to the free exportation of silver-lead ores to the United States in 1889 mining languished in Coahuila, as the United States was the chief market for its lead ores; but the erecting of smelters in Mexico and the creation of a home market for ores has again caused a resumption of mining operations.

Salt.—At Viesca, 5 miles from Hornos station on the Mexican International Railway, is a large salt lake covering an area of over 2 square miles. Salt is made by solar evaporation in a crude way. The supply is believed to be inexhaustible. In the central portion of Coahuila, along the line of the Mexican International Railway from Paila to Torreon, occurs a lime rock that yields, upon burning, a lime possessing remarkable hydraulic properties; mortar made from it rapidly sets and becomes harder than ordinary building stone.

Coal.—Until a few years ago the Republic of Mexico had been regarded as a region barren in coal measures of commercial value. The region of country bordering on the Rio Grande from above Eagle Pass, Tex., to below Laredo, Tex., and extending westerly and southerly over 100 miles in the State of Coahuila, is underlaid by coal measures of the cretaceous period. The extent of the coal areas of Coahuila is not yet definitely determined, but it is known to be large, and extensive work of development at two points over 100 miles apart strongly evidences the continuity of these coal measures.

Fuente coal.—At Fuente coal croppings occur along the bluff of the river bank where much erosion has worn away the rock formation. A company of capitalists from the city of Mexico has purchased 20,000 acres of land. A series of trial shafts were first sunk at intervals over this large acreage and proved the existence of underlying beds of coal. From the river escarpment the coal beds dip, at a very flat angle, northeasterly and, judging from the many trial shafts, are of uniform thickness and quality. This coal mine has been systematically opened up to meet a large coal output. An adit level has been sunk and galleries run over 500 feet, opening up two coal seams—one 5 feet 6 inches wide or thick above, then a band of valuable fire clay, and a lower coal seam 2 feet 6 inches thick. The quality of Fuente coal is that of a high-grade bituminous coking coal.

The Fuente coal mines should easily yield, with present developments, 100 tons per day, and this output can be rapidly augmented. Coke ovens are projected, and the owners of this property have received a subsidized concession from the Federal Government to build a standard-gauge railroad from Fuente, via Monclova, to Monterey, and thence to the city of Mexico.

Sabinas coal.—Near Sabinas station on the Mexican International Railway, 73 miles from Piedras Negras, are located the extensive coal mines of the Coahuila Coal Company and the Alamo Coal Company, representing a large investment of American capital. These companies jointly own 51 square leagues of coal lands, or about 220,646 English acres. This immense area is traversed by the track of the Mexican International Railway. Explorations by prospecting shafts and the diamond drill conclusively demonstrate that two, and perhaps three, coal horizons underlie this territory.

A standard-gauge railroad 13 miles in length unites the coal mines with the Mexican International Railway system.

At the mines are offices, storehouses, miners' quarters, mining machinery, and all appliances for mining and shipping a large monthly tonnage.

In 1890 there was mined 100,000 tons of coal and 4,000 tons of coke produced. There are twenty coke ovens now in operation. The coal is used on the Mexican International, shipped to the city of Mexico, and also exported to the United States for use on the Southern Pacific Railroad.

In 1889–'90 (fiscal year ended January 30, 1890) there were exported to the United States at this port 44,996 tons (2,240 pounds) of Sabinas coal, valued at $161,117.55 in United States gold.

The argillaceous ironstone of the Sabinas region, the mountains of iron ore (magnetic and hematite) at Monclova, and the limestone found all over the country, in connection with Sabinas coal and coke, comprise all the material requisites for manufacturing iron. The development of iron manufactories that are producing pig-iron from iron ores and the thousand attendant industries will be of incalculable benefit to Mexico, as Mexico now buys all her iron and iron manufactures.

EUGENE O. FECHET,
Consul.

UNITED STATES CONSULATE,
Piedras Negras, April 11, 1891.

THE HANNAFORD ELECTRIC LIGHTHOUSE.

REPORT BY CONSUL CONNOLLY, OF AUCKLAND.

Referring to Department instructions dated March 3, I have to report that Mr. Hannaford, the inventor of the Hannaford electric lighthouse, died shortly after I sent in my former report. I have experienced considerable difficulty in learning the whereabouts of his widow, she having moved away immediately after her husband's death; hence the delay.

It appears Mr. Hannaford had not patented his invention at the time of his death, but would have done so were he possessed of the means necessary to defray the expense. It also appears, owing to the death of the inventor, that some minor details remain unperfected, among which may be mentioned the water wheel intended to be operated by the rise and fall of the tide for the purpose of generating electricity. I am informed he had practically

abandoned this feature of his invention in favor of a kerosene engine, which he deemed to be more reliable. His widow exhibited the working model, but there were none of the mechanical appliances attached except the bell and windmill; the former sounds an alarm at each revolution of the windmill. In good clear weather this bell can be detached or thrown out of gear, and there will be no occasion to use it except on very dark nights or during the prevalence of heavy fogs. Should the other portions of the mechanism prove as satisfactory as the windmill and bell, there can be little doubt as to its practicability. The wooden model shown me appears to be quite simple and easily erected. The iron plates are fastened to an iron framework by a system of threaded bolts and nuts. There is a strong iron pillar reaching from the floor to the dome of the tower. Around this iron center post a spiral staircase is built, by which one is enabled to ascend the dome. The interior of the tower shows a number of shelves. On these shelves the electric fluid storing jars are to rest, but the jars are not in position, nor have I been able to see anything that would indicate the kind or character of storing appliances to be used. The windmill seems ungainly, owing to its construction. I believe the ordinary circular wheel would be productive of better results than the kind shown in the photograph I sent with my report of the Hannaford light.* But it is contended that the inventor's idea was that mariners could observe the motion of his windmill at a much greater distance than any other kind of moving object, owing to the great length and size of the arms. There is, no doubt, considerable merit in this contention. Referring to the water wheel, I am inclined to believe it was only an ill-defined idea of the inventor's. I am forced to this conclusion from the fact that I have been unable to observe any reference to or model of this wheel among his drawings. I presume, however, such a power could be utilized for the purpose referred to, provided it could be placed where a very strong current ran, otherwise it seems impracticable. It would be difficult to build a wheel or machine sufficiently sensitive to the rise and fall of tide in mid ocean to produce the necessary power.

If found desirable, the base of the tower could be used as a residence for the light-keepers.

The widow of the inventor is in possession of complete detail drawings made by a prominent engineer in Auckland, but would not allow an examination, being afraid that I would take advantage of her carelessness, as she expressed it. She is anxious, however, to dispose of the model and drawings for a nominal sum. She expressly requested me to state she would sell all right, title, and interest for the sum of $3,000. I can not say anything with reference to the practicability of the electrical appliances proposed, as I have not been able to see the drawings; even if I had, not being an electrician, my opinion might be misleading.

The engineer who made the detail drawings is not in Auckland at present. I intend as soon as he returns to see him and endeavor to obtain full

* See CONSULAR REPORTS, No. 121.

information as to the details. I may not be successful in this undertaking, as Mrs. Hannaford is anxious to dispose of the invention, but I shall at least make the effort. I may say in conclusion that the iron tower, windmill, and bell appear to be feasible, cheap, and easily erected. Should the electrical feature prove satisfactory, success is almost certain.

Since writing the foregoing statement I have written to the gentleman who made the drawings for Mr. Hannaford, requesting full particulars, to which he replied that he would be pleased when he returned to Auckland, to supply me with all the information in his possession as to details, also the inventor's ideas upon various matters in connection with his proposed light-house hitherto unexplained. I can not say at present when this gentleman will be able to furnish me with the necessary information. It may be a month or more, but I shall forward it as soon as received.

JNO. D. CONNOLLY,
Consul.

UNITED STATES CONSULATE,
Auckland, June 14, 1891.

BIRMINGHAM PEARL-BUTTON MAKERS.

REPORT BY CONSUL JARRETT.

I have the honor to forward the following article which appeared in the Daily Gazette of this city of July 4 last:

THE BIRMINGHAM PEARL-BUTTON TRADE AND THE M'KINLEY TARIFF.

Mr. J. Hayward, shipping agent, informs us that yesterday morning a number of Birmingham pearl-button makers, under arrangements made by him, left the city for the United States. The cause of this emigration can be traced directly to the operation of the McKinley tariff, which very considerably increased the duty on pearl buttons. Prior to that date Birmingham buttons were exported largely to America, and the effect of the new tariff was at once to completely debar makers here sending this class of goods out. Consequently, hundreds of pearl-button makers were immediately thrown out of employment and have remained so ever since. Finding that the duty levied was such as to be absolutely prohibitive, attention was called in America to the necessity of manufacturing for themselves. This they commenced to do at once. But, practical and experienced workmen being scarce, it was soon apparent that the out-of-work pearl cutters, turners, and finishers in Birmingham would obtain immediate and remunerative employment in America. Consequently, small bodies of these men have been crossing to the United States from time to time during the past 8 months, and their favorable reports have induced a very large number of their fellow-workmen to join them. The party left Birmingham this morning, will embark by the White Star liner Majestic, which will land them at New York, and they will then proceed to Newark, N. J., where numerous friends will be ready to welcome them. Special arrangements for the comfort and convenience of the party have been made under Mr. Hayward's superintendence, and arrangements have been made for other parties to follow shortly.

The following extract is from the Butte, Montana, Semi-Weekly Inter-Mountain, dated Wednesday, June 3, 1891:

"There is great activity in the pearl-button industry in Newark, N. J. Old factories which were closed for some years are now in full operation, and new factories have started up.

All of them have more orders than they can conveniently fill. Wages have been advanced from 40 to 90 per cent., and workmen who formerly earned $7 a week, when they could get a week's work, now earn from $16.50 to $23 per week. Several years ago there were about twenty-three factories in Newark making pearl buttons alone. The change in the tariff on pearl buttons at that time had a most disastrous effect on the industry. Nearly all the factories were closed, and all the work that the few had to do was to fill in such small orders as could not be attended to by the importers. Some work was also done for jewelers on pearl ornaments. In 7 months since the McKinley bill went into operation the trade is almost restored. That bill provides the rate of protection so long asked for by the button-makers, and its effect is almost magical."

The significance of this article is fully borne out by a reference to the statement of declared exports for the quarter just ended. It will be observed that the value of buttons is but $3,378.93, while for the corresponding quarter last year (1890) the value of buttons declared at this consulate was $63,414.07.

The value of shells declared for the quarter just ended is $21,013.52, and for the corresponding quarter of 1890 it was $2,401.09, thus clearly demonstrating the removal of the industry of manufacturing buttons to the United States. There are other important changes with which I will deal more fully in my annual statement at the end of this quarter.

JOHN JARRETT,
Consul.

UNITED STATES CONSULATE,
Birmingham, July 8, 1891.

THE WAYS OF TRADE IN BRAZIL.

REPORT BY MINISTER CONGER, OF RIO DE JANEIRO.

I have the honor to report that during my brief sojourn here I have given the matter of trade relations with this country such careful consideration as the limited time and opportunities have made possible, and I am convinced that the successful reciprocity negotiations have opened the doors of Brazilian trade to wonderful opportunities for our people if they will only properly and intelligently take advantage of them.

Diplomacy and legislation have done very much for them. They must now do something for themselves, and it must not be done blindly. The market is here, but it is fixed and controlled by habits which can not be easily changed nor disregarded. The successful Europeans have always observed these trade customs. They make such goods as this trade demands; they manufacture in such style, quality, and quantity as this people desire; they pack them to suit the convenience or tastes of their customers, sell upon such terms as they demand, and adopt the methods of exchange and payment required.

Our people can secure the trade which reciprocity offers them in no other way; but, once secured, acquaintance made, and business and confidential relations established, our better methods may undoubtedly be intro-

duced with mutual benefit. This will cost our people some time, patience, and expense, but the returns will be sure, ample, and not long delayed.

The flour trade is already well understood and established, and now, with free entry, needs only to be pushed in order that our mills may supply the trade which at present is largely controlled by those in Trieste.

Bacon and hams are in great demand here, and, while we can and do make as good as any in the world, yet little of ours is seen here, except it has crossed the Atlantic and been properly packed for an equatorial voyage and for this climate. They can and should be properly cured and packed at home and come direct. The same may be said of butter, cheese, meal, and fish.

It is not uncommon to see American butter and bacon in this market which have been shipped to Europe and there packed as our people might and should have done in the first place, and then reshipped and sold here with the necessary cost of second packing and a useless transatlantic voyage added to the price.

The people of Brazil insist upon cotton goods of a particular weight, width, quality, and color, and they must be folded and packed exactly as they desire, matters of little import or expense to our people, yet absolutely necessary to secure the trade. Wall paper, which is much used here, pays customs duties by weight, and so must be the thinnest possible. Carriages, harness, saddles, furniture, tools, implements, machinery, and manufactures of all kinds, must be of peculiar character and style; but, if of satisfactory kind, none are more popular than American. American locomotives are almost universally used, and American axes command the highest price. So popular, indeed, are the products of our skill and labor that many European manufacturers mark their goods with American brands in order to facilitate their sales.

Nearly all customs duties here are fixed by gross weight; the rough boards, hoops, and nails of which the packing boxes are made pay the same duty per pound as the delicate or valuable merchandise inside. The English and other Europeans early learned this, and now display exceeding cleverness in fashioning light, cheap, and durable coverings for their goods. Our people must do likewise.

A knowledge and adoption of the system of credits in vogue here is also indispensable. The merchants here sell on long time, and they must buy in the same way; but they are willing and accustomed to pay liberal interest on their accounts. The reasonable coöperation of our exporters and bankers surely can and should arrange for this with mutual profit.

The very complete statistics of Brazilian commerce, both export and import, already furnished by the CONSULAR REPORTS are sufficient to warrant a careful and close investigation by all of our people who desire to engage in or extend a profitable foreign trade.

I have only given hints. The investigation must be made by those who are willing to make personal profit from opportunities furnished them by legislation and diplomatic action and so bring about general public good.

Several instances of unprofitable and disastrous experience with American products in this market have come to my knowledge, but the failure in every case could be traced to the ignorance or carelessness of our people in the matter of either manufacturing, packing, or shipping.

I would therefore very respectfully suggest that some general note of warning be given, to the end that our people may not rush in here simply to meet loss and disappointment, but, instead, to secure profit and permanently prosperous trade.

E. H. CONGER,
Minister.

UNITED STATES LEGATION,
Rio de Janeiro, February 27, 1891.

RECIPROCITY WITH SAN DOMINGO.

PROCLAMATION BY THE PRESIDENT.

Whereas, pursuant to section 3 of the act of Congress approved October 1, 1890, entitled "An act to reduce the revenue and equalize duties on imports, and for other purposes," the Secretary of State of the United States of America communicated to the Government of the Dominican Republic the action of the Congress of the United States of America, with a view to secure reciprocal trade, in declaring the articles enumerated in said section 3, to wit, sugars, molasses, coffee, and hides, to be exempt from duty upon their importation into the United States of America;

And whereas the envoy extraordinary and minister plenipotentiary of the Dominican Republic at Washington has communicated to the special plenipotentiary of the United States the fact that, in reciprocity and compensation for the admission into the United States of America free of all duty of the articles enumerated in section 3 of said act, the Government of the Dominican Republic will, by due legal enactment, admit, from and after September 1, 1891, into all the established ports of entry of the Dominican Republic, the articles or merchandise named in the following schedules, on the terms stated therein, provided that the same be the product or manufacture of the United States and proceed directly from the ports of said States:

SCHEDULE A.

Articles to be admitted free of duty into the Dominican Republic:

1. Animals, live.
2. Meats of all kinds, salted or in brine, but not smoked.
3. Corn or maize, corn meal and starch.
4. Oats, barley, rye and buckwheat, and flour of these cereals.
5. Hay, bran and straw for forage.
6. Trees, plants, vines and seeds and grains of all kinds for propagation.
7. Cotton-seed oil and meal cake of same.
8. Tallow in cake or melted and oil for machinery, subject to examination and proof respecting the use of said oil.

9. Resin, tar, pitch and turpentine.

10. Manures, natural and artificial.

11. Coal, mineral.

12. Mineral waters, natural and artificial

13. Ice.

14. Machines, including steam-engines, and those of all other kinds, and parts of the same, implements and tools for agricultural, mining, manufacturing, industrial and scientific purposes, including carts, wagons, handcarts and wheelbarrows, and parts of the same.

15. Material for the construction and equipment of railways.

16. Iron, cast and wrought, and steel, in pigs, bars, rods, plates, beams, rafters and other similar articles for the construction of buildings, and in wire, nails, screws and pipes.

17. Zinc, galvanized and corrugated iron, tin and lead in sheets, asbestos, tar paper, tiles, slate and other material for roofing.

18. Copper in bars, plates, nails and screws.

19. Copper and lead pipe.

20. Bricks, fire bricks, cement, lime, artificial stone, paving tiles, marble and other stones in rough, dressed or polished, and other earthy materials used in building.

21. Windmills.

22. Wire, plain or barbed, for fences, with hooks, staples, nails, and similar articles used in the construction of fences.

23. Telegraph wire and telegraphic, telephonic and electrical apparatus of all kinds for communication and illumination.

24. Wood and lumber of all kinds for building, in logs or pieces, beams, rafters, planks, boards, shingles, flooring, joists, wooden houses, mounted or unmounted, and accessory parts of buildings.

25. Cooperage of all kinds, including staves, headings and hoops, barrels and boxes, mounted or unmounted.

26. Materials for shipbuilding.

27. Boats and lighters.

28. School furniture, blackboards, and other articles exclusively for the use of schools.

29. Books, bound or unbound, pamphlets, newspapers and printed matter, and paper for printing newspapers.

30. Printers' inks of all colors, type, leads and all accessories for printing.

31. Sacks, empty, for packing sugar.

32. Gold and silver coin and bullion.

SCHEDULE B.

Articles to be admitted into the Dominican Republic at a reduction of duty of 25 per centum:

33. Meats not included in Schedule A and meat products of all kinds, except lard.

34. Butter, cheese, and condensed or canned milk.

35. Fish and shellfish, salted, dried, smoked, pickled or preserved in cans.

36. Fruits and vegetables, fresh, canned, dried, pickled or preserved.

37. Manufactures of iron and steel, single or mixed, not included in Schedule A.

38. Cotton, manufactured, spun or twisted, and in fabrics of all kinds, woven or knit, and the same fabrics mixed with other vegetable or animal fibers in which cotton is the equal or greater component part.

39. Boots and shoes in whole or in part of leather or skins.

40. Paper for writing, in envelopes, ruled or blank books, wall paper, paper for wrapping and packing, for cigarettes, in cardboard, boxes and bags, sandpaper and pasteboard.

41. Tin plate and tinware for arts, industries and domestic uses.

42. Cordage, rope and twine of all kinds.

43. Manufactures of wood of all kinds not embraced in Schedule A, including wooden ware, implements for household use, and furniture in whole or in part of wood.

And that the Government of the Dominican Republic has further provided that the laws and regulations, adopted to protect its revenue and prevent fraud in the declarations and proof that the articles named in the foregoing schedules are the product or manufacture of the United States of America, shall place no undue restrictions on the importer, nor impose any additional charges or fees therefor on the articles imported.

And whereas the special plenipotentiary of the United States has, by my direction, given assurance to the envoy extraordinary and minister plenipotentiary of the Dominican Republic at Washington that this action of the Government of the Dominican Republic, in granting exemption of duties to the products and manufactures of the United States of America on their importation into the Dominican Republic, is accepted as a due reciprocity for the action of Congress as set forth in section 3 of said act:

Now, therefore, be it known that I, Benjamin Harrison, President of the United States of America, have caused the above-stated modifications of the tariff laws of the Dominican Republic to be made public for the information of the citizens of the United States of America.

In testimony whereof, I have hereunto set my hand and caused the seal of the United States to be affixed.

Done at the city of Washington, this first day of August, one thousand eight hundred and ninety-one, and of the independence of the United States of America the one hundredth and sixteenth.

BENJ. HARRISON,

By the President:

WILLIAM F. WHARTON,

Acting Secretary of State.

DIRECTIONS FOR BINDING CONSULAR REPORTS.

The regular monthly issues of the CONSULAR REPORTS, beginning with No. 1 (October, 1880) and ending with No. 127 (April, 1891), making thirty-five volumes, should be bound as follows:

Volume.	Months and year.	Numbers contained in volumes.
1	October and November, 1880	1, 2
2	January, February, March, April, May, and June, 1881	3, 4, 5, 6, 7, 8
3	July, August, and September, 1881	9, 10, 11
4	October, November, and December, 1881	12, 13, 14
5	January, February, March, and April, 1882	15, 16, 17, 18
6	May, June, July, and August, 1882	19, 20, 21, 22
7	September and October, 1882	23, 24, 24½
8	November and December, 1882	25, 25½, 26, 26½
9	January, February, March, and April, 1883	27, 28, 29, 30
10	July, August, September, and October, 1883	31, 32, 33, 34
11	November and December, 1883, January and February, 1884	35, 36, 37, 38
12	March, April, and May, 1884	39, 40, 41, 41½
13	June, July, and August, 1884	42, 43, 44
14	September, October, November, and December, 1884	45, 46, 47, 48
15	January, February, March, and April, 1885	49, 50, 51, 52
16	June (53 and 53½), July, August, and September, 1885	53, 53½, 54, 55, 56
17	October, November, and December, 1885	57, 58, 59
18	January, February, and March, 1886	60, 61, 62
19	April, May, June, July, August, and September, 1886	63, 64, 65, 66, 67, 68
20	September, October (68½, 69, and 70), November, and December, 1886	68½, 69, 70, 71, 72
21	January (73 and 73½), February, and March, 1887	73, 73½, 74, 75
22	April (76 and 77), May, and June (79 and 80), 1887	76, 77, 78, 79, 80
23	July, August, and September (83 and 84), 1887	81, 82, 83, 84
24	October, November, and December, 1887	85, 86, 87
25	January, February, and March (90 and 91), 1888	88, 89, 90, 91
26	April, May, and June, 1888	92, 93, 94
27	July, August, and September, 1888	95, 96, 97
28	October, November, and December, 1888	98, 99, 100
29	January, February, March, and April, 1889	101, 102, 103, 104
30	May, July (106 and 106½), and August (107 and 107½), 1889	105, 106, 106½, 107, 107½
31	September, October, November, and December, 1889	108, 109, 110, 111
32	January, February, March, and April, 1890	112, 113, 114, 115
33	May, June, July, and August, 1890	116, 117, 118, 119
34	September, October; November, and December, 1890	120, 121, 122, 123
35	January, February, March, and April, 1891	124, 125, 126, 127

Each number of CONSULAR REPORTS contains an index for immediate reference. The number index and number contents should be thrown out when binding in volumes. Beginning with volume 17 (Nos. 57, 58, and 59), there are volume indexes, which should be bound with their respective volumes. Up to volume 17 there were no volume indexes issued. Two general indexes have been prepared and issued, viz: First, a general index embracing No. 1 (October, 1880) to No. 59 (December, 1885)—vols. 1 to 17, inclusive; second, a general index, embracing Nos. 60 to 111 (vols. 18 to 31)—January, 1886, to December, 1889.

The following is an illustration of the manner in which the backs of the volumes should be legended:

CONSULAR REPORTS.	CONSULAR REPORTS.	CONSULAR REPORTS.
1880.	1881.	1891.
VOL. 1.	VOL. 2.	VOL. 35.
NUMBERS 1 & 2.	NUMBERS 3, 4, 5, 6, 7, 8.	NUMBERS 124, 125, 126, 127.
DEPARTMENT OF STATE.	DEPARTMENT OF STATE.	DEPARTMENT OF STATE.
WASHINGTON.	WASHINGTON.	WASHINGTON.

REPORTS

FROM THE

CONSULS OF THE UNITED STATES.

No. 131.—AUGUST, 1891.

ISSUED FROM THE BUREAU OF STATISTICS, DEPARTMENT OF STATE.
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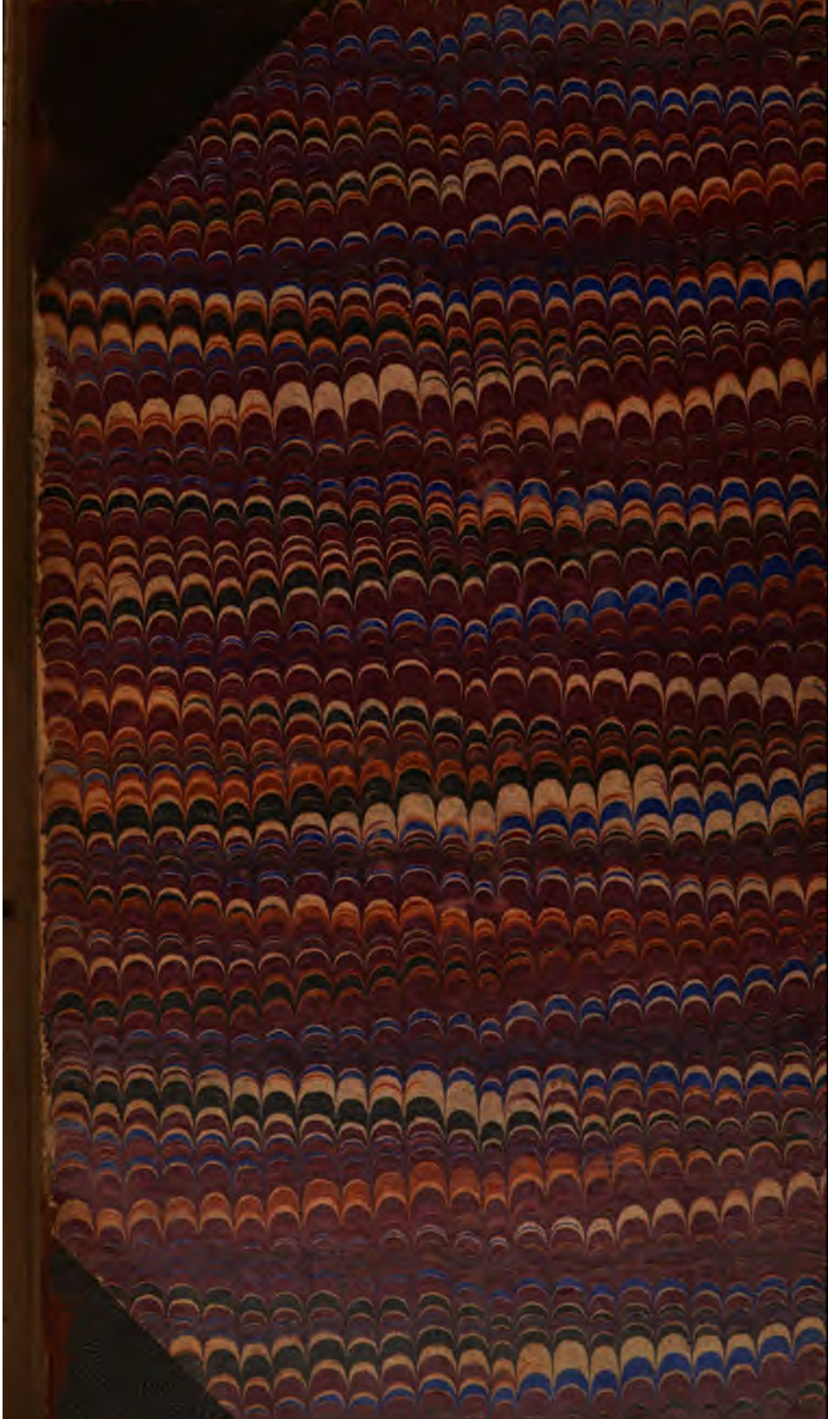
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